This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

THE E 3T''AN LABORATORIES

FIFTY-FIFTH

ANNUAL CATALOGUE

OF THE

UNIVERSITY OF ROCHESTER

A COLLEGE OF LIBERAL ARTS

1904-1905

E. R. Andrews Printing Co., Rochester, N. Y.

Organization

The University of Rochester opened its doors for students in the autumn of 1850, and gave instruction in that year to seventy-one young men by means of a faculty of eight professors and instructors. Its first class of ten men was graduated in July, 1851. The idea of establishing a college in Rochester originated as early as 1847, when many friends of Christian education among the Baptists of the State of New York expressed a conviction that such an institution should be established by that body in this center of a large and growing population. The project was emphatically endorsed in the same year by citizens of Rochester, and financial assistance was pledged to it by leading men irrespective of creed. It was not until January 31, 1850, however, that plans were sufficiently perfect to secure from the Regents of the University of the State of New York a provisional charter. On compliance with certain conditions named in this provisional charter, the Regents, on February 14, 1851, granted the permanent charter under which the College is at present organized. This charter is in all respects similar to the old charter of Columbia College in the city of New York, and invests the corporation "with all the privileges and powers conceded to any college in this state, pursuant to the provisions of the sixth section of the statute entitled 'An Act relative to the University,' passed April 5, 1813."

The name adopted by the founders and incorporated in the charter is *The University of Rochester.* This name was adopted with appreciation of the large significance which attaches to it, and at the outset the founders organized what

they termed the Collegiate Department of the University of Rochester. This is the only department of work which the institution has undertaken, and this catalogue therefore announces only the work of a College of Liberal Arts. The University has not yet organized a graduate faculty, nor does it offer courses for the degree of doctor of philosophy. The master's degree is granted in recognition of specific work done under the direction of the Faculty, tested by a thesis and an examination.

For the first fifty years of its life the University of Rochester was a college for young men. In 1900 the Trustees admitted women to the classes "on the same terms and conditions as men," subscriptions to the amount of $50,000 having been obtained by a committee of Rochester women to secure this end. All the opportunities and privileges of instruction in class-room, lecture, and laboratory are open to the women equally with the men. It is the purpose of the Trustees to maintain for young men all the advantages which were offered them prior to 1900, while extending its ministries to a new class of students, for whom it will aim to secure the fullest opportunity for development of their own interests in connection with the educational privileges they share in common with the men.

The Board of Trustees

	Elected.
LEWIS P. ROSS, *President,* - - - - - - - - 60 St. Paul Street, Rochester, N. Y.	1892
J. SLOAT FASSETT, LL. D., *First Vice-President,* - - (*Class of 1875*) Elmira, N. Y.	1885
ANDREW J. TOWNSON, *Second Vice-President,* - - 240 Main Street East, Rochester, N. Y.	1899
CHARLES M. WILLIAMS, A. B., *Secretary,* - - - (*Class of 1871*) 710 Wilder Building, Rochester, N. Y.	1888
JOSEPH T. ALLING, A. M., *Treasurer,* - - - - (*Class of 1876*) 68 Exchange Street, Rochester, N. Y.	1895
[1]EDWIN O. SAGE, A. B., - - - - - - - -	1867
ROBERT S. MACARTHUR, D. D., LL. D., - - - (*Class of 1867*) 358 West 57th Street, New York, N. Y.	1878
JOHN H. DEANE, A. M., - - - - - - - - - (*Class of 1866*) 27 Pine Street, New York, N. Y.	1879
JOHN P. MUNN, A. B., M. D., - - - - - - - (*Class of 1870*) 18 West 58th Street, New York, N. Y.	1886
GEORGE C. HOLLISTER, B. S., - - - - - (*Class of 1877*) 4 Granger Place, Rochester, N. Y.	1890
HENRY C. VEDDER, D. D., - - - - - - - (*Class of 1873*) Chester, Pa.	1894
RUFUS A. SIBLEY, - - - - - - - - 240 Main Street East, Rochester, N. Y.	1895
WALTER S. HUBBELL, A. B., - - - - - (*Class of 1871*) 605 Wilder Building, Rochester, N. Y.	1895
DAVID J. HILL, LL. D., - - - - - - - - United States Legation, Berne, Switzerland.	1896

[1] Died January 11, 1904.

RUSH RHEES, D. D., LL. D., - - - - - - - 1899
440 University Avenue, Rochester, N. Y.

JOHN B. CALVERT, D. D., - - - - - - - 1899
(*Class of 1876*) Potter Bldg., Park Row, New York, N. Y.

ALBERT H. HARRIS, A. B., - - - - - - - 1900
(*Class of 1881*) 15 Roch. Sav. Bank Bldg., Rochester, N. Y.

WILLIAM R. TAYLOR, D. D., - - - - - - - 1901
13 Prince Street, Rochester, N. Y.

L. EMMETT HOLT, A. M., M. D., LL. D., - - - 1902
(*Class of 1875*) 14 West 55th Street, New York, N. Y.

WILLIAM S. ELY, A. M., M. D., - - - - - - 1902
(*Class of 1861*) 78 South Fitzhugh Street, Rochester, N. Y.

ALBERT R. PRITCHARD, A. B., - - - - - - 1903
4 Argyle Street, Rochester, N. Y.

CHARLES W. McCUTCHEN, - - - - - - 1903
95 Broad Street, New York, N. Y.

Committees of the Board

THE EXECUTIVE COMMITTEE

For 1 year:
- GEORGE C. HOLLISTER
- WALTER S. HUBBELL
- WILLIAM S. ELY
- ALBERT R. PRITCHARD

For 2 years:
- LEWIS P. ROSS, *Chairman*
- ALBERT H. HARRIS
- WILLIAM R. TAYLOR

For 3 years:
- JOSEPH T. ALLING
- CHARLES M. WILLIAMS, *Secretary*
- RUFUS A. SIBLEY
- ANDREW J. TOWNSON
- RUSH RHEES

COMMITTEE ON INTERNAL MANAGEMENT

RUSH RHEES
JOSEPH T. ALLING
WILLIAM R. TAYLOR
CHARLES M. WILLIAMS
LEWIS P. ROSS, *ex-officio*

COMMITTEE ON LIBRARY AND CABINETS

ALBERT H. HARRIS
RUSH RHEES
WALTER S. HUBBELL
JOSEPH T. ALLING
WILLIAM S. ELY
LEWIS P. ROSS, *ex-officio*

COMMITTEE ON BUILDINGS AND GROUNDS

RUSH RHEES
ANDREW J. TOWNSON
GEORGE C. HOLLISTER
CHARLES M. WILLIAMS
LEWIS P. ROSS, *ex-officio*

COMMITTEE ON FINANCE

ANDREW J. TOWNSON
RUFUS A. SIBLEY
JOSEPH T. ALLING
ALBERT H. HARRIS
ALBERT R. PRITCHARD
LEWIS P. ROSS, *ex-officio*

AUDITING COMMITTEE

GEORGE C. HOLLISTER
WILLIAM R. TAYLOR
WALTER S. HUBBELL

COMMITTEE TO EXAMINE SECURITIES

GEORGE C. HOLLISTER
WALTER S. HUBBELL

ADVISORY COMMITTEE

JOHN P. MUNN
JOHN H. DEANE
L. EMMETT HOLT

FISCAL AGENT

THE SECURITY TRUST COMPANY,
103 Main St. East, Rochester, N. Y.

DEPOSITORY OF PERMANENT FUNDS

THE FIDELITY TRUST COMPANY,
Powers Block, Rochester, N. Y.

The Faculty

RUSH RHEES, D. D., LL. D., - - *440 University Avenue*
PRESIDENT, AND BURBANK PROFESSOR OF BIBLICAL LITERATURE

SAMUEL ALLAN LATTIMORE, PH. D., LL. D.,
PROFESSOR OF CHEMISTRY *595 University Avenue*

ALBERT HARRISON MIXER, LL. D., *626 University Avenue*
EMERITUS PROFESSOR OF MODERN LANGUAGES

JOSEPH HENRY GILMORE, PH. D., - - *31 Park Avenue*
DEANE PROFESSOR OF RHETORIC AND ENGLISH

OTIS HALL ROBINSON, PH. D., - - *273 Alexander Street*
EMERITUS PROFESSOR OF NATURAL PHILOSOPHY

WILLIAM CAREY MOREY, PH. D., D. C. L., *94 Oxford Street*
WATSON PROFESSOR OF HISTORY AND POLITICAL SCIENCE

HENRY FAIRFIELD BURTON, A. M., - *4 Dartmouth Street*
PROFESSOR OF LATIN

[1] GEORGE MATHER FORBES, A. M., - *27 Tracy Street*
PROFESSOR OF PHILOSOPHY AND PEDAGOGY

HERMAN LEROY FAIRCHILD, B. S., - *363 Alexander Street*
PROFESSOR OF GEOLOGY, AND CURATOR OF THE GEOLOGICAL MUSEUM

CHARLES WRIGHT DODGE, M. S., - - *330 Oxford Street*
PROFESSOR OF BIOLOGY, AND CURATOR OF THE ZOÖLOGICAL MUSEUM

HENRY EDMUND LAWRENCE, A. B., *3 Dartmouth Street*
HARRIS PROFESSOR OF PHYSICS

RYLAND MORRIS KENDRICK, A. B., *21 South Goodman Street*
MUNRO PROFESSOR OF GREEK

THOMAS CUSHING ESTY, A. M., - - *130 Harvard Street*
PROFESSOR OF MATHEMATICS

JOHN FRANKLIN FORBES, PH. D., *215 Westminster Road*
ACTING PROFESSOR OF PHILOSOPHY AND PEDAGOGY

[1] Absent on leave.

KENDRICK PHILANDER SHEDD, A. B., *240 Westminster Road*
ASSISTANT PROFESSOR OF MODERN LANGUAGES

ROLAND PALMER GRAY, A. B., - - *20 Rowley Street*
ROSWELL S. BURROWS ASSISTANT PROFESSOR OF ENGLISH

CLARENCE KING MOORE, A. M., - - *88 Meigs Street*
ASSISTANT PROFESSOR OF ROMANCE LANGUAGES

CHARLES HOEING, PH. D., - - - *210 Oxford Street*
INSTRUCTOR IN LATIN

WILLIAM DAYTON MERRELL, PH. D., *239 Westminster Road*
INSTRUCTOR IN BIOLOGY

CHARLES WILLIAM WATKEYS, A. B., *12 Anderson Avenue*
INSTRUCTOR IN MATHEMATICS

HOWARD DANIEL MINCHIN, A. M., - *142 Grand Avenue*
INSTRUCTOR IN ASTRONOMY AND PHYSICS

FRED LEONARD LAMSON, A. B., - - *177 Harvard Street*
INSTRUCTOR IN MATHEMATICS

JOHN WILLIAM HOBBS POLLARD, B. L., M. D., *8 Scio Street*
DIRECTOR OF PHYSICAL EDUCATION

ELIZABETH HARRIET DENIO, PH. D., - - *8 Scio Street*
LECTURER ON THE HISTORY OF ART

Registrar, and Secretary of the Faculty,
FRED LEONARD LAMSON, A. B. - - - *Anderson Hall*

Janitor,
JAMES HENRY CRAIGIE, - - - - - - - *Anderson Hall*

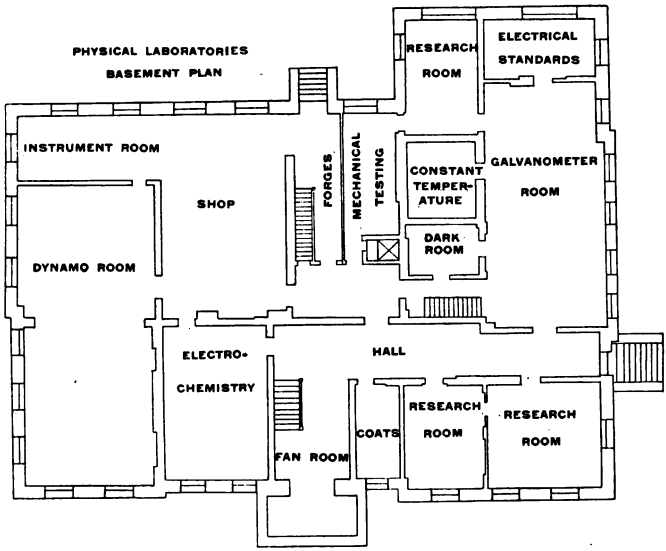
The Library

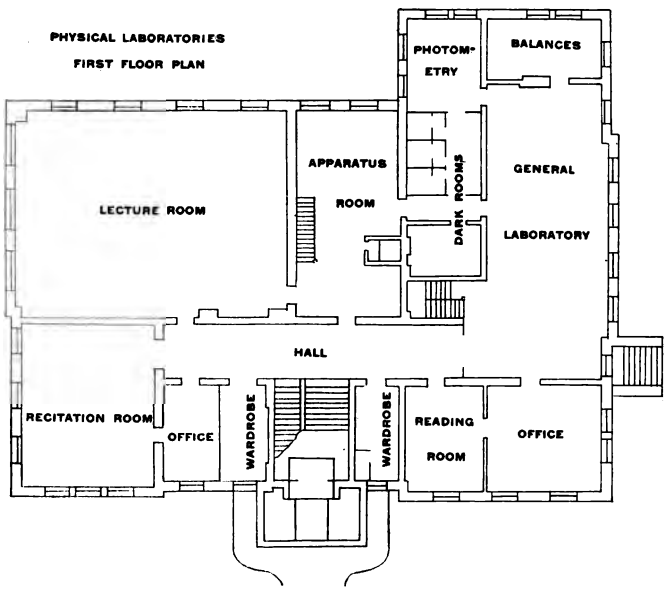
HENRY FAIRFIELD BURTON, A. M., - - - *4 Dartmouth Street*
Chairman of the Library Committee

CHARLES HOEING, PH. D., - - - - - - *210 Oxford Street*
Librarian

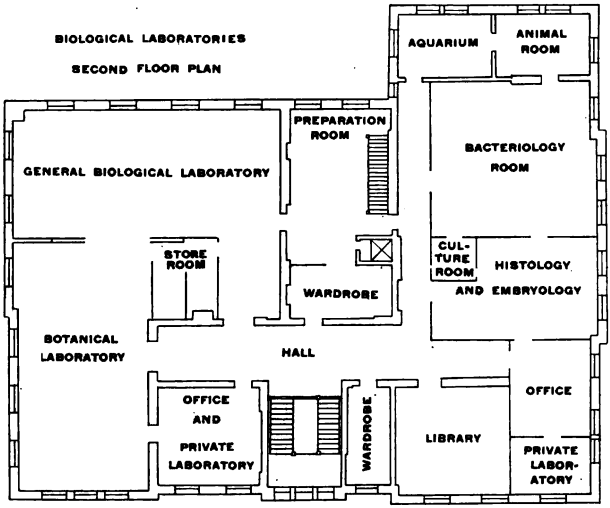
HERMAN KENT PHINNEY, A. M., - - - - *8 Brighton Street*
Assistant Librarian

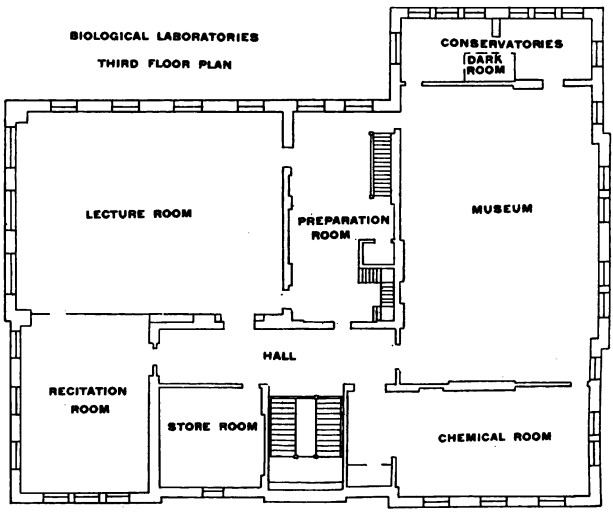
MRS. JANE C. RICH - - - - - - - *349 University Avenue*
Assistant in the Library





THE EASTMAN LABORATORIES





THE EASTMAN LABORATORIES

Equipment

THE BUILDINGS AND GROUNDS

The Campus. The University occupies a campus of twenty four acres, situated in one of the most beautiful parts of the city, on the line of an electric railway connecting with other lines radiating in every direction. The grounds constitute a beautiful private park, affording ample accommodations for every kind of field sports.

Anderson Hall, the oldest of the buildings, was completed in 1861; in it are the chapel, lecture rooms, and professors' offices. For the present year also the laboratories for biology and physics are in Anderson Hall.

Sibley Hall, erected in 1874 by Hiram Sibley, contains the library, the museums, and the geological lecture room and laboratory.

The Reynolds Memorial Laboratory was built in 1886 for the department of Chemistry by Mortimer F. Reynolds as a memorial to his brother, William A. Reynolds, a Trustee of the University.

The Alumni Gymnasium was opened for use in 1900; it is fully equipped with apparatus and baths, including a swimming pool, furnishing, thus, every facility for physical training.

Central Heating Station. All of the buildings are heated from a central heating station. This equipment was installed in the summer of 1904 at a cost of about $29,000.

The Eastman Laboratories. Mr. George Eastman, of Rochester, has given $60,000 for the erection of a new building for physical and biological laboratories, and other

liberal friends have contributed over $40,000 more for the equipment and maintenance of such a building. The ground was broken and the basement walls were built in the autumn of 1904, and the work on the building will be pushed to completion as soon as the spring opens in 1905, with a view to having these laboratories ready for occupancy in September. The accompanying illustrations will serve to show the appearance of the building and the distribution of space to the two departments. The building will consist of three stories and a high basement. The basement and first story will form the physical laboratories, the second and third stories the biological laboratories.

There are, as yet, no college dormitories. Several of the chapter-houses of the Greek-letter fraternities, however, are located close to the campus. These furnish accommodations for many of their members. Students also find comfortable homes with families residing within a few minutes' walk of the College, in the most attractive quarter of the city.

The Library. The library is located in the building provided for it by the Honorable Hiram Sibley, of Rochester. His son, Mr. Hiram W. Sibley, who last year placed in the entrance corridor a bronze portrait bust of his father, during the last summer has greatly improved the building at a cost of about $15,000. The capacity for books has been largely increased and the space for reading and study also enlarged by the erection of a steel gallery thirteen feet in width in the library room, fully furnished with cases for books. The main floor has been opened up in a series of twelve alcoves, by transfer to the gallery of about half of the cases previously on the floor. These alcoves have been furnished with tables and chairs for readers and students, and each is abundantly lighted. The rest of this main floor has been newly furnished throughout, and will constitute a general reading room with capacity for about 20,000

volumes, the total capacity of the library being now increased to about 60,000 volumes. In addition to these changes, the library has been newly and attractively decorated, and a new system of heat and ventilation and electric lighting has been installed for the entire building.

In connection with these improvements Mr. Sibley has presented to the library a circulating musical library, consisting of musical scores, and the literature of music and musicians. This library numbers at present about 800 volumes. This gift represents an outlay of $3,000.

In addition to this new collection, the library contains about 42,500 volumes, together with several thousand pamphlets, and the valuable collection of scientific books and periodicals belonging to the Rochester Academy of Science. Provision is made for the increase of the library by a fund established by the late General John F. Rathbone, of Albany, for many years a vice-president of the Trustees. The late Edwin O. Sage, of Rochester, gave also $5,000, which has been set apart by the Trustees for library endowment. The income from these funds is annually supplemented by an appropriation from the general fund.

Both in the selection of books and in the classification of the library, primary regard is given to the wants of the several departments of instruction in the College. It is the policy of the library, however, to provide also for the wants of the general public, so far as funds at its disposal will permit. The library is already supplied with a good collection of works of such general interest, and with files of a large number of the best periodicals, both general and special, in German, French, Italian, and Spanish, as well as in English.

The librarian gives instruction to all new students in the use of books and the consultation of this library.

The new musical library is open to the citizens of Roch-

ester, with the privilege of withdrawal of books for home use, subject only to such conditions as apply in all public libraries. The general library of necessity is administered primarily for the benefit of the members of the College. The general public, however, is cordially welcome at all times to the use of the reading room with the privilege of consultation of any books possessed by the library, and to all other privileges as far as the usefulness of the library for the purposes of the College will permit.

The library is open from 8:30 a. m. to 5:30 p. m. daily throughout the year, excepting Sundays and legal holidays.

DONATIONS

During the year there were added to the library by purchase 783 volumes and by gift 636 volumes, including public documents, periodicals and catalogues, and donations from individuals.

The following have been recent donors of books:

Mr. E. J. Bailey; Mr. R. C. E. Brown; Carnegie Steel Co.; Chickering & Sons; Prof. J. C. C. Clarke, D. D.; Prof. G. A. Coe; Council of School Superintendents of the State of New York; Miss E. H. Denio, PH. D.; Derrick Publishing Co.; Prof. C. W. Dodge; Hon. J. S. Fassett; First Baptist Church of Philadelphia; Prof. G. M. Forbes; Mr. E. R. Foreman; Prof. J. H. Gilmore; Hon. C. H. Harrison; Rev. L. B. Hartman, D. D.; Interpres Board; Prof. E. H. Johnson, D. D.; Missouri Commission to the Louisiana Purchase Exposition; Mr. Elias Molee; Hon. W. S. Paine; President Rush Rhees; Mr. L. S. Richards; Prof. Otis H. Robinson; Rochester Chamber of Commerce; Rockefeller Institute for Medical Research; Hon. A. J. Rodenbeck; Mr. W. D. Scott; Prof. K. P. Shedd; Siamese Royal Commission to the Louisiana Purchase Exposition; Mr. H. W. Sibley; New York Society of Sons of the Revolution; G.

E. Stechert & Co.; Prof. J. S. Stevens; E. V. Stoddard, M. D.; Chi Charge of Theta Delta Chi; Miss Phoebe Titus; Prof. H. A. Ward; C. S. Welles, M. D.; The University of Chicago.

Other Libraries Available to Students

The Library of the Rochester Theological Seminary contains about 33,000 volumes, which by courtesy are placed at the service of the students of the College. Although selected chiefly with reference to the requirements of theological students, this library contains a very large number of works, especially in the departments of philosophy and history, which render it a valuable auxiliary to the instruction given in the College.

The Reynolds Library was established through the generosity of Mr. M. F. Reynolds, as a free reference and circulating library for the citizens of Rochester. It contains about 54,000 volumes, and is especially valuable on account of the possession of a large number of standard works of reference. It has complete sets of nearly all the best American and English periodicals. Its resources are constantly made use of by the students of the College for the investigation of subjects connected with their courses of study.

The Appellate Division Law Library contains over 27,000 volumes. This library is next to the largest public law library in the State of New York. While it is intended to meet the special needs of the legal profession, it contains many works which are useful to general students in history and political science.

There are thus accessible to the students of the College in the libraries in the city of Rochester about 157,000 volumes.

The Laboratories

The Reynolds Chemical Laboratory. The department of Chemistry occupies the Reynolds Memorial Laboratory, which was specially planned to combine the best possible facilities for chemical work. All the rooms are spacious and well-lighted. In the basement are the assay laboratory, shop, and storage room. The first story contains the qualitative laboratory with accommodations for forty students, the quantitative laboratory with room for twenty students, the reference library, balance room, store room, and professor's office and private laboratory. The second story contains the chemical lecture room, the apparatus room, the chemical cabinet, the optical room, and the photographic laboratory.

The Biological Laboratories. The department of Biology occupies, at present, seven rooms on the third floor of Anderson Hall. These rooms are well-lighted and ventilated, and are provided with gas and water. They comprise a large lecture room and general laboratory, a bacteriological laboratory, a botanical laboratory, and a work room where reagents, anatomical material, etc., may be prepared. This suite of laboratories furnishes accommodations for sixty students working at one time, and is provided with the apparatus needed for the various lines of biological work, including compound and dissecting microscopes, a large Zeiss stand with apochromatic objectives and compensating oculars, a filar micrometer, Abbe camera lucida, Thoma and Minot microtomes, paraffine baths, injecting apparatus, incubating oven, steam and hot air sterilizers, autoclave, glassware, etc.; also a complete set of the reagents and stains used in histology and embryology. For the work in physiology

there has been provided a very complete outfit of apparatus essential to the demonstration of the fundamental facts of the science including a kymograph, spring myograph, sphygmograph, and many other instruments of precision used in demonstrating and recording the phenomena of muscle, nerve, circulation, respiration, the special senses and the like; a series of clastic models (Auzoux), including a manikin, heart, eye, ear, brain, lungs, and a series of Ziegler's wax models of the brains of typical vertebrates; also a human skeleton and a number of osteological preparations, such as a skull entire, a skull disarticulated (Beauchene), a vertebral column, thorax, upper and lower limbs. A collection of skeletons, illustrating all of the classes of vertebrates and nearly all of the orders of mammals, serves for work in comparative osteology. A complete set of Ziegler's wax models of the development of amphioxus and of the chick and of Deyrolle's models of the development of the human embryo illustrate the work in embryology. Numerous standard and specially made charts and a departmental library facilitate the work of instruction.

The botanical laboratory is provided with a departmental library, a very full collection of laboratory material for work in general morphology, and microtomes, paraffine oven, and all necessary reagents. The laboratory has a full equipment of apparatus for work in plant physiology, including a klinostat and auxanometer. Complete sets of the Errara and Laurent physiological charts, and of the Dodel-Port Anatomical and Physiological Atlas of Botany, facilitate the work of instruction. Provision for special work upon the fungi and in vegetable pathology will soon be made.

In September, 1905, the Department of Biology will be removed to its new quarters on the second and third floors of the Eastman Laboratories (see description on page 11).

The second floor will contain the biological laboratories

—a general laboratory connecting with a botanical laboratory in such a manner that the two can be used together and furnish accommodation for sixty students working at the same time; a large preparation room; a bacteriological laboratory; a histological laboratory; a vivarium and an aquarium; a department library; and instructors' offices and private laboratories.

The third floor will contain the biological lecture room with seats for two hundred students and a chart and preparation room attached; a recitation room; a chemical laboratory for all chemical work incidental to biological study; conservatories for the culture of botanical material; and a large room for the biological museum.

These laboratories will be fully furnished with gas, water, high pressure steam and the most recent apparatus for general instruction and for special study.

The Physical Laboratory. The department of Physics occupies, at present, eight rooms upon two floors and in the basement of Anderson Hall. They are furnished with gas, water, vacuum and pressure pipes, and power by means of electric motors. The present equipment comprises sufficient illustrative apparatus to render possible a course of experimental lectures covering the elements of the subject and extending through the year. The laboratory apparatus includes Sartorius balances, Société Genevoise dividing engines linear and circular, and a Société Genevoise comparateur, a 120 centimeter column cathetometer constructed in the laboratory; galvanometers of all types, Siemens' electrodynamometer, ammeters and voltmeters of the Weston, Whitney, and Thompson types, Kelvin electrostatic voltmeter, standard condensers and resistances, standard cells, Max Kohl twelve-inch induction coil, thirty-inch eight-plate Wimshurst influence machine constructed in the laboratory, twenty-cell storage battery of fifty ampere-

hour capacity constructed in the laboratory, one thousand-cell water battery constructed in the laboratory, portable storage batteries, Hartmann and Braun bridge, Otto Wolff potentiometer and bridge with standard cells, regulator and multiplier, all with Reichsanstalt certificates; Société Genevoise spectrometer, prisms, gratings; polariscope with collection of crystals; Société Genevoise optical bench with attachments for diffraction and interference; Michelson interferometer from Gaertner; Schmidt and Haensch spectrometer with horizontal and vertical table, grating holder, quartz objectives, prisms and slits for a large variety of work, polarization attachment and attachment for spectrum photography, the whole making a complete outfit for spectrum investigation; Schmidt and Haensch polariscope for the study of liquids; standard thermometers, barometers and the like.

In September, 1905, the new Eastman Laboratories will be ready for use, and the department of Physics will be assigned the ground floor and first story in this new building. (see page 11).

The ground floor will be well lighted with high windows, and will be carefully constructed to exclude dampness and to obtain solid foundations for instruments of precision. On this floor will be the galvanometer laboratory with concrete floor, slate shelf on the outer wall, and constructed free from iron. In connection there will be a room provided with stone piers for electrical standards and instruments of precision, several rooms equipped for special research, a constant temperature room and a dark room. The ground floor will also contain a large dynamo laboratory, located as far as possible from the space assigned for galvanometer work; an electro-chemical laboratory; a thoroughly equipped shop for the construction and repair of apparatus; a forge room, and a room for storage batteries and gas generators.

The first floor will be provided with a lecture room seated for about two hundred people, fully equipped in all particulars for experimental lectures in physics, with an ample apparatus room for both lecture and laboratory apparatus; a general physical laboratory with accommodations for twenty-five students working at one time; a balance room provided with stone piers for mechanical measurements; a laboratory for the study of light, with full supply of dark rooms for photometry and photography; a recitation room; a department library, and offices for the instructors.

The laboratories and lecture room will be fully furnished with water, gas, electricity, compressed air, and high pressure steam for experimental purposes. These new laboratories will be thoroughly equipped with reference to the interests of general classes, and the conduct of special investigations by more advanced students. In addition to the apparatus already mentioned a large amount has already been ordered, or is in process of construction in the laboratory. For such construction the shop will be adequately equipped, and will be in the charge of the present competent mechanician, Mr. John W. Radu.

It is the policy of the University to offer to the students every facility for advancement in the study of physics.

The Telescope. A telescope, mounted equatorially on a stone pier, is located in a building erected for that purpose. This instrument, which was made by Clark, has a six-inch object glass, and is provided with right ascension and declination circles. It is designed only as an adjunct to instruction, though sufficiently powerful for purposes of investigation.

The Geological Laboratory. The department of Geology occupies the second floor of Sibley Hall. The main hall is devoted to the geological museum (see page 22). The laboratory is temporarily located in the geological lecture

room in the tower, adjacent and convenient to the museum and cabinets. Facilities are provided for the study of minerals and rocks in their physical properties. A large collection of lantern views, photographs and maps illustrates physical and structural geology. Material is at hand for special work in paleontology and in glacial and economic geology.

The Museums and Cabinets

The Ward Geological Collections. The Geological Museum consists chiefly of the original collections in mineralogy, petrography, paleontology, and phenomenal geology made by Professor Henry A. Ward, LL. D. They were accumulated by him through many years of labor and extensive travel in execution of a plan to create a complete museum of geology for use in teaching. The material thus successfully gathered was purchased in 1862 for the University, chiefly through the generosity of citizens of Rochester. At that time it was the largest and choicest geological collection in America, including about 40,000 specimens, handsomely mounted and labeled. The Ward collections have been supplemented by gifts from various classes and individuals, and by subsequent purchases, and thus constitutes to-day one of the best geological museums in the country. Among the later acquisitions the most notable are several of the Ward casts of famous fossils, given by various classes; a huge crystal of gypsum, believed to be the largest ever found in perfection, 51 x 21 inches and weighing 612 pounds, given by the class of 1896; the Educational Series of rock specimens, 156 in number, presented by the United States Geological Survey; a collection of carboniferous plants, made by Professor H. L. Fairchild, who gathered them in the Wyoming and Lackawanna coal basin; and a small collection of material relating to prehistoric man.

The museum is open to the public, and offers to the people and schools of Western New York an exceptional opportunity for the study of the earth's structure and history.

The systematic collection in mineralogy contains a great

majority of the mineral species now recognized. These are represented by about 5,000 choice specimens, including commonly both crystallized and amorphous examples of the mineral. The specimens are largely from European localities—the rich mining regions of Cornwall, Saxony, and Hungary having furnished many of the choicest masses of ores and most brilliant crystals. Among the largest groups are the fluorites, the quartzes and the calcites.

Crystallography and economic and phenomenal geology are illustrated by special collections.

The collection of rocks, about 3,000 in number, was gathered by Professor Ward from the localities where specific rocks were first described. In addition to the specimens exhibited in the cases, there are in the drawers special collections representing the geology of characteristic regions; among these are 150 specimens from Vesuvius, once in d'Archaic's cabinet, 180 from Tuscany, 100 from Mt. Blanc, 120 from the Paris Basin, 80 from Saxony, 200 from Central France, and several hundred collected by the State Geological Survey, representing the New York strata.

The paleontological collection represents clearly the life of past ages. Under each geological age the fossils are arranged biologically, in order of rank, with the exception of those of the Age of Reptiles, which are so numerous and prominent that the three periods (Triassic, Jurassic and Cretaceous) are treated separately. The slabs on the walls are mostly copies of famous reptilian fossils. The collection contains about 8,000 species of European fossils besides those from America, altogether represented by about 25,000 specimens. It is particularly rich in ammonites and Tertiary mollusks. This collection is supplemented and enriched by a number of the large Ward casts.

Of material relating to prehistoric man, the museum contains a small but well authenticated collection of flint and

bronze instruments from the drift regions of Abbéville and St. Acheul, in France; also, a collection of stone implements from the vicinity of Copenhagen, and a collection of North American stone implements, with numerous specimens of pottery from the tombs of the Incas.

The Zoölogical Collection, at present on the third floor of Sibley Hall, was established during 1890, the nucleus being the material already possessed by the University, and the vertebrates gathered by Professor Henry A. Ward during a South American journey in 1889. The collection contains, among other things, a good representation of South American birds and mammals, including a family group of the ostrich, together with a number of edentates and monkeys. The museum also contains many cœlenterates, echinoderms and mollusks. A series of models illustrates some of the lower forms. An especial effort is being made to represent the local fauna.

Other Collections Available to Students

Ward's Natural Science Establishment. The students of the biological and geological sciences have an unusual opportunity in the proximity of Ward's Natural Science Establishment. This institution not only surpasses in size and scope any similar establishment in the world, but in some respects is entirely unique. It has adhered to its high purpose of handling only typical and well authenticated material, and has been largely instrumental in creating or helping museums all over the country, and in stimulating scientific study. In itself the establishment has been an educational institution. Much of the work done there requires careful research with thorough examination and comparison of specimens, and many persons connected with it have become scientific workers of reputation. The establishment

had its beginning in the accumulation of the collection now possessed by the University. Students have free access to the establishment when accompanied by an instructor.

Botanical Institutions. The extensive nurseries of Messrs. Ellwanger & Barry, the largest in the world; the other great seed farms, nurseries, and plant houses located in or near Rochester; and the splendid collection of orchids and of rare and curious exotic plants belonging to Mrs. William S. Kimball, one of the largest in the United States, furnish the student with unrivaled opportunities for the study of botanical science, both pure and applied. Through the courtesy of their proprietors, all of these institutions are freely open to students taking biological work.

Expenses and Aid

There are, as yet, no college dormitories. Patrons are recommended to secure for students whom they send to the College, so far as practicable, the influence of a Christian home. Boarding and rooms can be obtained in private families for from $3.50 to $6.00 a week. The Registrar will furnish all necessary information on the subject.

Tuition for undergraduates is $25.00 a term. The fee for incidental expenses—such as janitor service, heat, light, repairs and use of the gymnasium—is $7.00 a term.[1] Additional fees, to cover the cost of fuel, power and materials consumed in their work are charged to students who take work in the chemical, biological, geological, and physical laboratories, and a special graduation fee of $10 is charged to Seniors.

Term bills are due at the beginning of each term, and must be paid before October 1, January 15, and April 10, respectively. Students who are pursuing special studies pay full tuition. No deduction is made for absence.

A year's expenses may be estimated from the following table and notes. The flexible items are given on three scales.

	Low.	Average.	Liberal.
Tuition (3 terms)	$ 75	$ 75	$ 75
Incidentals	21	21	21
Living expenses, board, lodging, etc.	130	175	250
Books and stationery	15	25	40
	$241	$296	$386

[1] The incidental fee for women, for whom as yet no gymnasium facilties are available, is $5.00 a term.

In addition to the annual tuition and incidental charges named above, fees are charged in laboratory courses to cover the cost of materials and gas and electricity used in such work. These fees vary from $1 to $10 a term in the different courses. See the description of the courses on pages 81 to 119.

Expenses for traveling, clothing, subscriptions to college societies and student organizations are so distinctly personal that they cannot be averaged.

STUDENT EMPLOYMENT

A limited number of students are given the opportunity of paying their tuition wholly or in part by means of services in the library or in the laboratories or in other departments of the College. The amount of service expected in payment of tuition varies with the nature of the work, but the compensation is usually estimated at 20 cents an hour.

A large number of students find profitable employment in the city in teaching private pupils, and in various other occupations, thus enabling them to provide in considerable part for the expenses of their education. Students who have practical acquaintance with any of the useful arts are generally able to procure remunerative employment in the city.

Students who desire outside employment are aided in their efforts to obtain it through an employment bureau conducted by the Registrar, who keeps on file information concerning every student who desires employment, and by co-operating with the employers of the city renders systematic aid in this direction.

SCHOLARSHIPS ESTABLISHED FOR MEN

The Baptist Union Scholarships, forty in number, one of which is the **Hollenbeck Scholarship,** are awarded to students for the Christian ministry, on recommendation of

the New York Baptist Union for Ministerial Education. Application for the scholarships should be made to the Corresponding Secretary of the Union (the Rev. J. R. Henderson, D. D., Trevor Hall, Rochester). If the applicant is approved by the Baptist Union, the Secretary of the Union furnishes him an order entitling him to tuition ($75.00 a year). This is to be presented to the President of the University, and if the applicant is found to be "worthy by character, attainments, and diligence to receive the bounty," the order is endorsed by the President and is accepted by the Treasurer.

The Rochester City Scholarships, twenty-four in number, six in each class, three in the classical course and three in the philosophical and scientific courses, are granted by the Trustees to the City of Rochester for the benefit of young men graduating from the Rochester High School. Four of these scholarships, one in each class, are **Prize Scholarships,** yielding tuition and incidental fees ($96.00 a year), the others yield only tuition ($75.00). Nominations to these scholarships are made by the Principal of the High School in June of each year, the prize scholarship being assigned to the candidate whose record is the highest. In September the scholarships are awarded according to these nominations if the candidates have entered a regular course without conditions. The scholarships may be retained throughout the course of four years if the holders continue in a regular course and have met the conditions specified on page 33.

The Burbank Scholarships, four in number, one in each college class (yielding $75.00 a year), endowed by John H. Deane, of New York City, are awarded to young men graduating from the Brockport Normal School. The Principal of the Normal School furnishes the Registrar, prior to the entrance examinations in June, the names of all qualified

candidates, arranged, first, in the order of their standing, second, in the order of their financial need. Only those candidates are eligible who are admitted to a regular course, without condition, at the June examinations. As soon as possible thereafter the scholarship will be awarded by the College to the applicant considered most worthy, and he will be notified of his appointment. The holder of the scholarship for the Freshman year is given the preference in the award for each of the following years of the course, provided he has met the conditions specified on page 33.

The Burrows Scholarship was established by the Trustees in 1901 in memory of Roswell S. Burrows, of Albion, N. Y., a generous benefactor of the University. The scholarship (yielding $75.00 a year) is awarded to a young man graduating from the Albion High School who is nominated for it by the Board of Education of Albion.

The Buffalo Prize Scholarships. Three prize scholarships are offered by the Trustees for the coming year to students in the Central, the Masten Park, and the Lafayette High Schools in Buffalo, one for each school. These scholarships yield tuition and incidental fees ($96.00 a year). The Principal of each of these schools may designate a young man of high ability, as recipient of a prize scholarship. If he enters a regular course in September, 1905, without conditions, he will receive the scholarship, and may retain it for four years, if he fulfils the conditions specified on page 33.

Three Prize Scholarships, yielding tuition and incidentals ($96.00 a year), in addition to those granted to the high schools in Rochester and Buffalo, are offered by the Trustees each year to the three applicants from any other schools who pass the best entrance examinations in June, provided that but one of these scholarships will be awarded in any one year to applicants from any one school. The holder of one of these scholarships may retain it through a

regular course of four years if he fulfils the conditions specified on page 33.

The College possesses in addition the scholarships named below. Unless otherwise stated, each scholarship entitles its holder to tuition ($75.00 a year). The scholarships are awarded to those applicants who best fulfil the conditions stated on pages 32, 33, unless special stipulations inconsistent with those conditions have been made by the donors. Scholarships endowed for the benefit of certain classes of persons may be assigned to others, if no qualified person of the classes specified apply for them. If the donor of a scholarship who has reserved the right to designate the recipient fails to exercise that right, the scholarship may be awarded by the College.

The Bronson Scholarship, endowed by W. C. Bronson of Painted Post.

The Cole Scholarship, endowed by P. Charles Cole of New York City. Preference is to be given to the heirs of the donor.

The Davis Scholarship, endowed by Isaac Davis of Worcester, Mass.

The Deane Scholarships, ten in number, endowed by John H. Deane of New York City for the benefit of sons of Baptist ministers who require aid in procuring an education, preference being given to students from the States of New York and New Jersey.

The De Land Scholarship, endowed by Henry A. De Land of Fairport.

The Fox Scholarship, endowed by Alanson J. Fox of Detroit, Mich.

The Galusha Scholarships, two in number, endowed by Norman H. Galusha of Rochester.

The Greenleaf Scholarship, endowed by Halbert S. Greenleaf of Rochester.

The Huntington Scholarship, endowed by Nathan and Calvin Huntington of Rochester. Preference is to be given to members of the Huntington family.

The Huntley Scholarship, endowed by Byron E. Huntley of Batavia.

The Johnson Scholarship, endowed by Elias Johnson of Troy.

The Sheffer Scholarship, endowed by Mary M. Sheffer of Chili.

The Sheldon Scholarship, endowed by Abram Sheldon of Adams Center.

The Sibley Scholarship, endowed by Rufus A. Sibley of Rochester.

The Tucker Scholarship, endowed by Ephraim W. Tucker of Boston, Mass. Preference is to be given, first, to a blood relation of the donor; second, to a native of the Town of Ogden, Monroe County.

The Waters Scholarships, five in number, endowed by Mrs. Ann Waters of Brooklyn.

The Wright Scholarship, endowed by Alfred Wright of Rochester.

SCHOLARSHIPS ESTABLISHED FOR WOMEN

The Rochester City Scholarships, eight in number, two in each class, one in the classical, and one in the philosophical or the scientific course, are granted by the Trustees to the City of Rochester for the benefit of young women graduating from the Rochester High School. Four of these scholarships, one in each class, are **Prize Scholarships,** yielding tuition and incidentals ($90.00 a year), the others yield simply tuition ($75.00). The award is made on terms similar to those which control the city scholarships for men. (See page 28.)

The College possesses in addition the following scholarships established for the benefit of women:

The Mary S. Anthony Scholarship, endowed by Miss Mary S. Anthony of Rochester.

The Susan B. Anthony Scholarship, endowed by friends of Miss Anthony.

The Helen Barrett Montgomery Scholarship, endowed by a friend of Mrs. W. A. Montgomery of Rochester.

The Whitcomb Scholarship, endowed by Mrs. Tursey G. Whitcomb of Rochester.

The Willis Scholarship, endowed by Mrs. Sarah L. Willis of Rochester.

GENERAL CONDITIONS

a *Governing the award of scholarships*

All scholarships, excepting the Baptist Union Scholarships, the Rochester City Scholarships, the Burbank Scholarships, the Burrows Scholarship, and the several Prize Scholarships, the terms of which have already been named, are awarded on the following conditions:

1 Every applicant is required to make a formal application on a printed blank provided for the purpose, giving a detailed statement of the circumstances which render the request necessary; and this application must be endorsed by two persons familiar with the circumstances of the applicant, but not related to him by blood or marriage, and not officially connected with the University as teacher or trustee.

2 Scholarships are granted for one college year only, at the expiration of which, if renewal is desired, application must be made with the same formality as at first.

3 Scholarships are granted only to students who are pursuing one of the regular courses for a degree, and (except in the case of new students) whose average standing

during the preceding college year has reached 80 per cent. (for prize scholarships 90 per cent.)

4 In the case of new students a scholarship is granted subject to the following provisions:—

(1) When an application has been received and approved, the applicant will be notified that he is accepted as a scholarship student.

(2) Such a student will be expected to pay the tuition and other fees for the first term.

(3) If the student's average standing for the first term reaches 80 per cent. the scholarship award will be confirmed, and the payment made on tuition account in the first term will be credited on account of all the incidental and laboratory fees which may be chargeable to the student for the remainder of the year.

(4) If the student's average standing for the first term fails to reach 80 per cent. the scholarship will not be awarded.

b *Governing the retention of scholarships*

1 If the holder of a scholarship fails to reach an average standing of 80 per cent. in any term, he forfeits his scholarship for the following term.

2 If, by reason of failure to pass an examination within the prescribed time, he is required to take any study with a lower class or under a private tutor, he forfeits his scholarship for the term to which that study belongs.

3 If he receives a second warning to improve in his studies, or is under discipline, he forfeits his scholarship until his standing becomes satisfactory, or until the discipline is terminated.

DEFERRED TUITION

Students who are unable to pay tuition, but to whom scholarships yielding free tuition cannot be awarded, may be

granted the privilege of deferring payment until after graduation, ultimate payment being guaranteed by notes, satisfactorily endorsed, without interest for a limited period. The form of application for deferred tuition and the general conditions upon which it is granted are the same as for scholarships, except that—

1 Deferred tuition may, in exceptional cases, be granted to special students.

2 Deferred tuition is not granted to any student whose standing in any subject for the preceding year (in the case of a new student, during his first term's residence) falls below 60 per cent.; and if he fails to reach a standing of 60 per cent. in any subject in any term, he forfeits the privilege for the following term.

All inquiries concerning scholarships and deferred tuition should be addressed to the President.

Admission

Candidates for admission to the Freshman class must be at least fifteen years of age. Every candidate, before presenting himself for examination, must be formally registered. In connection with his registration he must furnish to the Registrar a testimonial of good moral character from the Principal of the preparatory school from which he comes, or from some citizen in good standing.[1]

Students applying for admission from another college must bring certificates of honorable dismission, together with an official statement of college work already done.

By action of the Trustees, which became effective September 8, 1900, women are admitted to the College on the same terms and conditions as men.

THE REQUIREMENTS FOR ADMISSION

The entrance requirements are indicated in detail on pages 38 to 47. The subjects prescribed for admission to the several courses are as follows:

For the Classical Course, leading to the degree Bachelor of Arts.

Total requirements, 14 points[2]

English (1st, 2nd, and either 3rd or 4th years) (pages 38, 39)	3	points
Mathematics (pages 42–45)	2	"
Algebra (1)		
Geometry (1)		

[1] In the case of schools which have the privilege of recommending students for admission, the certificate form for scholastic work provides also for the requisite testimonial of good character.

[2] A point being defined as a subject pursued for an entire school year with five exercises a week of not less than forty minutes each.

Review of Algebra and Plane Geometry[1]		½ points
Latin (pages 39, 40)		4 "
Grammar and 1st year Latin	(1)	
Cæsar	(1)	
Cicero and Prose Composition	(1)	
Vergil	(1)	
Greek (page 39)		3 "
Grammar and 1st year Greek	(1)	
Xenophon and Prose Composition	(1)	
Homer	(1)	
History (pages 46, 47)		1½ "
United States and Civics	(½)	
Greek	(½)	
Roman	(½)	

For the Philosophical Course, leading to the degree Bachelor of Philosophy.

Total requirements, 14 points

English (1st, 2nd, and either 3rd or 4th years) (pages 38, 39)		3 points
Mathematics (pages 42–45)		2 "
Algebra	(1)	
Geometry	(1)	
Review of Algebra and Plane Geometry[1]		½ "
Latin[2] (pages 39, 40)		4 "
Grammar and 1st year Latin	(1)	
Cæsar	(1)	
Cicero and Prose Composition	(1)	
Vergil	(1)	
German or French (pages 40–42)		2 "
Elementary (1st and 2nd year)		
History (pages 46, 47)		1½ "
United States and Civics	(½)	
Roman	(½)	
And one half point from the following:		
Greek	(½)	
English	(½)	
Medieval	(½)	

[1] One point in advanced mathematics, including solid geometry, may be substituted for the review of algebra and plane geometry.

[2] Greek (3 points) may be substituted for Latin in the philosophical course provided that the candidate offers also an additional point in advanced German, in French, or in physics.

One point from the following:		1	point
Physics[1] (page 46)	(1)		
German or French (pages 40–42)—			
Intermediate (3rd year)	(1)		
French or German (1st year)	(1)		

For the Scientific Course, leading to the degree of Bachelor of Science.

Total requirements, 14 points

English (1st, 2nd, and either 3rd or 4th years) (pages 38, 39)		3	points
Mathematics (pages 42–45)		2	"
Algebra	(1)		
Geometry	(1)		
Review of Algebra and Geometry[2]		½	"
Foreign Language. Not less than 4 nor more than 6 points		4–6	"
German (pages 41, 42) Elementary (1st and 2nd year)	(2)		
French (pages 40, 41) Elementary (1st and 2nd year)	(2)		
Latin (2, 3, or 4) (pages 39, 40)			
Physics[1] (page 46)		1	"
History (pages 46, 47)		1½	"
United States and Civics	(½)		
Greek	(½)		
Roman	(½)		
English	(½)		
Medieval	(½)		
To complete the 14 points required, not more than two points may be selected from the following:		0–2	"
Advanced Mathematics (pages 43, 44)			
Advanced Algebra	(½)		
Solid and Spherical Geometry	(½)		
Plane and Sph'l Trigonometry	(½)		
Chemistry[1] (page 46)	(1)		
Botany[1] (page 46)	(1)		
Zoölogy[1] (page 46)	(1)		
Physical Geography[1] (page 46)	(½)		

[1]Laboratory note-books must be presented for all work in science offered for admission.

[2]One point in advanced mathematics, including solid geometry, may be substituted for the review of algebra and plane geometry.

Students desiring to pursue a special course, leading to no degree, are required, *except in extraordinary cases,* to pass an examination, or to give satisfactory certificates, in the following *minimum requirement:*

English *a* and *b* (pages 38, 39)		2	points
Mathematics *a* and *b* (pages 42, 43)		2	"
History *a* and either *b*, *c*, *d* or *e* (pages 46, 47)		1	"
And one language		2	"
Latin *a* and *b* (page 39)	(2) or		
Greek *a* and *b* (page 39)	(2) or		
German (pages 41, 42)	(2) or		
French (pages 40, 41)	(2)		

Special students are further required to qualify in the *full* entrance requirements in any department in which they wish to pursue college work, except in the case of German and French, which may be begun in college. They may also be examined in any further subjects deemed to be essential by the instructors in the studies which they wish to take.

For further regulations concerning special students see page 72.

A fair equivalent for the requirements for admission will be accepted; but candidates for admission are advised to conform literally to the requirements of the catalogue.

DETAILED STATEMENT OF ENTRANCE REQUIREMENTS

English: a *Reading.* The applicant will be required to write in the presence of the examiner brief essays on themes assigned at the time. These essays will test his familiarity with spelling and the fundamental principles of English grammar and composition, and his acquaintance with the following works:

Shakespere's Merchant of Venice; Shakespere's Julius Cæsar; The Sir Roger de Coverley Papers; Goldsmith's The Vicar of Wakefield; Coleridge's The Rime of the Ancient

Mariner; Scott's Ivanhoe; Carlyle's Essay on Burns; Tennyson's The Princess; George Eliot's Silas Marner; and Lowell's Vision of Sir Launfal.

A general knowledge of the substance of the above-named books will be expected—such knowledge as an intelligent reader would naturally have after reading the book through once.

b *Study and Practice.* An examination which presupposes the thorough study of each of the works named below. The examination will be upon subject matter, form, and structure, and will also test the applicant's ability to express his knowledge with clearness and accuracy. The books set for this part of the examination are:

Shakespere's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

Greek: a *Grammar.* A thorough knowledge of forms and ordinary usages of syntax.

b *Xenophon.* The first four books of the Anabasis.

c *Homer.* The first three books of the Iliad.

d *Composition.* The ability to translate into Greek prose simple English sentences based on the Anabasis of Xenophon. Jones's, Woodruff's, Higley's, and Flagg's text books in composition are recommended.

Latin: a *Grammar.* A thorough knowledge of forms and the ordinary usages of syntax.

b *Cæsar.* The first four books of the Gallic War, or two books of Cæsar and an equivalent amount of Nepos.

c *Cicero.* Six orations, *viz.* the four against Catiline, the Archias, and the Manilian Law.

d *Virgil.* The first six books of the Aeneid, or, instead of the fifth book, an equal number of lines from the Eclogues or from Ovid's Metamorphoses.

e *Composition.* The ability to translate into Latin prose

simple English sentences based on the orations of Cicero required for admission. Jones's, Daniell's, and Bennett's text books in composition are recommended.

French: a *Grammar.* A thorough knowledge of forms and of the ordinary usages of syntax.

b *Composition.* Ability to put into French simple sentences exemplifying the grammatical constructions and easy variations of the texts read. In amount this work should be equivalent to the retranslation of about one-tenth of the number of pages read in French.

c *Reading.* During the first year of preparation from 100 to 175 duodecimo pages of graduated texts; during the second, 250 to 400 pages of easy modern prose.

d *Pronunciation.* Careful drill together with practice in writing French from dictation.

These requirements are conformed to the recommendations of the Modern Language Association of America for elementary French; namely, two years of work as follows:

During the first year the work should comprise: (1) careful drill in pronunciation; (2) the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural of nouns, the inflection of adjectives, participles, and pronouns, the use of personal pronouns, common adverbs, prepositions, and conjunctions, the order of words in the sentence, and the elementary rules of syntax; (3) abundant easy exercises, designed not only to fix in memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (4) the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; (5) writing French from dictation.

During the second year the work should comprise: (1) the reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; (2) constant practice, as in the previous year, in translating into French easy variations upon the texts read; (3) frequent abstracts, sometimes oral and sometimes written, of portions of the text

already read; (4) writing French from dictation; (5) continued drill upon the rudiments of grammar, with constant application in the construction of sentences; (6) mastery of the forms and use of pronouns, pronominal adjectives, of all but the rare irregular verb forms, and of the simpler uses of the conditional and subjunctive.

Suitable texts for the second year are: About's *Le roi des montagnes,* Bruno's *Le tour de la France,* Daudet's easier short tales, La Bédollière's *La Mère Michel et son chat,* Erckmann-Chatrian's stories, Foa's *Contes biographiques* and *Le petit Robinson de Paris,* Foncin's *Le pays de France,* Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon,* Legouvé and Labiche's *La cigale chez les fourmis,* Malot's *Sans famille,* Mariet's *La tâche du petit Pierre,* Mérimée's *Colomba,* extracts from Michelet, Sarcey's *Le siège de Paris,* Verne's stories.

German: a *Grammar.* A thorough knowledge of forms and of the ordinary usages of syntax.

b *Composition.* Ability to put into German simple sentences exemplifying the grammatical constructions and easy variations on the texts read. In amount this work should be equivalent to the translation of about one-tenth of the number of pages read in German.

c *Reading.* During the first year of preparation from 75 to 100 duodecimo pages of graduated texts; during the second, 150 to 200 pages of literature in the form of easy stories and plays.

d *Pronunciation.* Careful drill together with the memorizing and frequent repetition of easy colloquial sentences.

These requirements are conformed to the recommendations of the modern Language Association of America for elementary German; namely, two years of work as follows:

During the first year the work should comprise: (1) careful drill upon pronunciation; (2) the memorizing and frequent repetition of easy colloquial sentences; (3) drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of everyday life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common prepositions, the simpler

uses of the modal auxiliaries, and the elementary rules of syntax and word-order; (4) abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; (5) the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

During the second year the work should comprise: (1) the reading of from 150 to 200 pages of literature in the form of easy stories and plays; (2) accompanying practice, as before, in the translation into German of easy variations upon the matter read, and also in the off-hand reproduction, sometimes orally and sometimes in writing, of the substances of short and easy selected passages; (3) continued drill upon the rudiments of the grammar, directed to the ends of enabling the pupil, first, to use his knowledge with facility in the formation of sentences, and, secondly, to state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder;* Arnold's *Fritz auf Ferien;* Baumbach's *Die Nonna* and *Der Schwiegersohn;* Gerstäcker's *Germelshausen;* Heyse's *L'Arrabbiata; Das Mädchen von Treppi,* and *Anfang und Ende;* Hillern's *Höher als die Kirche;* Jensen's *Die braune Erica;* Leander's *Träumereien,* and *Kleine Geschichten;* Seidel's *Märchen;* Stökl's *Unter dem Christbaum;* Storm's *Immensee* and *Geschichten aus der Tonne;* Zschokke's *Der zerbrochene Krug.*

The best shorter plays available are: Benedix's *Der Prozess, Der Weiberfeind,* and *Günstige Vorzeichen;* Elz's *Er ist nicht eifersüchtig;* Wichert's *An der Majorsecke;* Wilhelmi's *Einer muss heiraten.* Only one of these plays need be read. The narrative style should predominate. A good selection of reading matter for the second year would be: Andersen's *Märchen,* or *Bilderbuch,* or Leander's *Träumereien,* to the extent of, say, forty pages. After that, such a story as *Das kalte Herz,* or *Der zerbrochene Krug;* then *Höher als die Kirche,* or *Immensee;* next a good story by Heyse, Baumbach, or Seidel; lastly, *Der Prozess.*

Mathematics: a *Algebra.* This includes the following subjects: the four fundamental operations for rational algebraic expressions: factoring, determination of highest common factor and lowest common multiple by factoring;

fractions; including complex fractions, ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations. Radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative; quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; problems depending on quadratic equations; the binomial theorem for positive integral exponents; the formulas for the *n*th term and the sum of the terms of arithmetical and geometrical progressions, with applications.

It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

NOTE: The requirements of the Regents of the University of the State of New York will be accepted in place of the above syllabus.

b *Plane Geometry.* The usual theorems and constructions of good text books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle; the solution of numerous original exercises, *including loci problems;* application to the mensuration of lines and plane surfaces.

c *Advanced Algebra.* Variation; the binomial theorem (proof for positive integral exponents only); the theory and use of logarithms and exponential equations; permutations

and combinations limited to simple cases; undetermined coefficients with applications to partial fractions and the expansion of functions in series; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations, but not the multiplication theorem; numerical equations of higher degree, and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes' rule of signs and Horner's method, but not Sturm's functions or multiple roots.

NOTE: While the above syllabus is recommended, an applicant may present an equivalent list of topics.

d *Solid Geometry.* The usual theorems and constructions of good text books, including the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

e *Trigonometry.* Definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulas, in particular for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle, the product expressions for the sum of the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; the solution of right and oblique triangles, and practical applications, including the solution of right spherical triangles.

In each subject great importance is attached to readiness and accuracy, and to neatness in the arrangement of written work.

In algebra and geometry no certificate will be accepted for work that has not been pursued or reviewed within the year preceding the time of admission.

In algebra, whether entering by certificate or by an examination, the student is expected to have at the time of entering a working knowledge of the principles necessary for the solution of such examples as the following:

1 Factor $(2a-3b)^2-(a-b)^2$

2 Simplify $\dfrac{1+\frac{1}{x^3}}{1-\frac{1}{x^3}} \div \dfrac{x^2+4x+3}{x^3+4x^2+4x+3}$

3 Simplify $\left[\sqrt[3]{\dfrac{a^{-1}b^2}{b^4a}} \times \sqrt[3]{\dfrac{b\sqrt{a^{-2}}}{\sqrt{ab^2}}}\right]^{-2}$

4 Rationalize the denominator of $\dfrac{5+\sqrt{3}}{5-\sqrt{3}}$

5 Solve $\sqrt{2x-1}+\sqrt{2x+4}=5$

6 Multiply $4\sqrt{-3}$ by $3\sqrt{-5}$

7 Extract the square root of $6-\sqrt{35}$

8 Find the third term of $(a-3b)^{10}$

9 Solve $ax^2+bx+c=0$

10 Solve $3x^2+x-2=0$, using the result of the preceding problem as a formula.

11 Solve $x^2-7x+\sqrt{x^2-7x+18}=24$

12 Solve $2^{-\frac{1}{3}} \times 5x^{-\frac{2}{3}} - 7 = 0$

13 $\begin{cases} x+y=8 \\ x^2+y^2=34 \end{cases}$

14 Interpret graphically the equations and their solution in 13.

Physics: The equivalent of one year's training with daily exercises, two-fifths of which time should be devoted to laboratory work. *A note-book covering forty experiments, properly certified by the instructor, must be presented at the time of entrance.* Any one of the following text books represents the matter that should be covered: Carhart and Chute, Hall and Bergen, Nichols (Outlines), Wentworth and Hill, Gage, Thwing.

Chemistry: The equivalent of one year's training (daily work) in the general laws and theories of chemistry, and the occurrence, preparation, and properties of the common elements and their compounds as presented in such text books as Remsen's Briefer Course, Watson, Williams, or Shepard.

Botany: One year's training (daily work) in general botany as treated in the text book of Atkinson, Bergen, Coulter, or Spaulding. *A note-book describing all laboratory and field work must be presented at the time of entrance.*

Zoölogy: One year of daily work in the subject as treated in such text books as Kellogg, Jordan, Davenport. Part of the time should be devoted to practical studies by the student, and *a note-book, describing this work and certified by the instructor, must be presented at the time of entrance.*

Physical Geography: One half year of daily work in the subject as treated in such text books as Tarr, Davis, and Dryer, with training in the laboratory and in the field. *A note-book, describing the laboratory and field work, certified by the instructor, must be presented at the time of entrance.*

History: a *American History and Civil Government,* from the beginning of the colonial period to the present

time, as treated in the school histories of Montgomery, Fiske, McMaster or Adams and Trent.

b *Roman History,* from the founding of the city to the reign of Charlemagne, as treated in the school histories of Morey, Myers, Botsford, or West.

c *Greek History,* including a brief survey of ancient oriental nations, as treated in the school histories of Morey, Myers, Botsford, or West.

d *Mediæval and Modern History,* from the empire of Charlemagne to the treaty of Berlin, as treated in the school histories of Adams, Robinson, or West.

e *English History,* from the Roman conquest to the death of Victoria, as treated in the school histories of Montgomery, Wrong, Cheyney, or Andrews.

Applicants for the classical course are required to pass in *a, b,* and *c;* those for the philosophical course in *a, b,* and one other, and those for the scientific course in *a,* and two others of the above requirements.

Registration for Examination

Candidates for admission are required to present themselves for registration at Anderson Hall promptly at the time appointed for registration in the programme of entrance examinations (see below). All applicants for the examinations must show to each examiner registration cards indicating the course for which application is made.

Times and Order for Examination

The first examinations for admission occur on the Monday and Tuesday following Commencement, in accordance with the following programme:

Monday (June 26, 1905)

8 a. m. to 12 m.— Registration.
1.30 to 3.30 p. m.— Written examination in English.
3.30 to 5.30 p. m.— Oral examinations in Greek and Latin authors and in Greek and Roman History.

Tuesday

8.15 to 9.45 a. m.— Written examination in Algebra.
10. to 11 a. m.— Written examination in Geometry.
11 a. m. to 1 p. m.— Oral examinations in Modern Languages and in History (Mediæval, Modern, American.)
2 to 2.45 p. m.— Written examination in Latin Composition and Grammar.
3 to 3.45 p. m.—Written examination in Greek Composition and Grammar.
2 to 5.30 p. m.— Oral examinations in Natural Sciences (Note books must be presented to the examiners).

A report of the result of the June examinations will be sent to each candidate by mail within one week from the time they are taken.

The second examinations for admission occur on the Tuesday and Wednesday before the opening of the Autumn term, in accordance with the following programme:

Tuesday (September 19, 1905)

8 a. m. to 1 p. m.— Registration.
2 to 4 p. m.—Written examination in English.
4 to 6 p. m.— Oral examinations in Greek and Latin authors, and in Greek and Roman History.

Wednesday

8.15 to 9.45 a. m.— Written examination in Algebra.
10 to 11 a. m.— Written examination in Geometry.
11 a. m. to 1 p. m.— Oral examinations in Modern Languages and in History (Mediæval, Modern, American).
2 to 2.45 p. m.— Written examination in Latin Composition and Grammar.
3 to 3.45 p. m.— Written examination in Greek Composition and Grammar.
2 to 5.30 p. m.— Oral examinations in Natural Sciences (Note books must be presented to the examiners).

Examinations held by the College Entrance Examination Board of the Middle States and Maryland will be accepted in place of the examinations conducted by this College.

Admission by Certificate

Certain academies, high schools, and normal schools are permitted to enter their graduates as students in this College without examination. This privilege is granted only to schools which are known to furnish full and satisfactory preparation for college in at least one of the three courses of study, the certificate being accepted only for those courses in which full preparation is given.

A school which desires the certificate privilege is required to make personal application through its Principal, to furnish on a blank supplied by the Registrar of this College full particulars regarding the work of the school, and to send a catalogue or circular of the school, if one is published. The same information is required once in three years of all schools holding the certificate privilege. The privilege may be withdrawn at the discretion of the Faculty. In case of the withdrawal of the privilege, notice will be sent to the Principal early in the school year.

Each certificate must be made out on a blank furnished (on application) by the Registrar, and must give exact information regarding the amount and character of the work of the student in each subject.

The certificate will be accepted in lieu of an entrance examination only to the extent it actually covers, or is equivalent to, the published requirements for admission—the student still being required to pass an entrance examination upon those studies or portions of studies which are not specifically covered by the certificate.

No certificate will be accepted unless presented within

fifteen months from the date of the student's completion of his preparatory course.

Certificates must be sent to the Registrar by the authorities of the school at the earliest possible date and not later than the Saturday immediately preceding the autumn entrance examination.

Certificates, and academic diplomas given by the Regents of the University of the State of New York will be accepted in lieu of entrance examinations, in all the topics which they specifically cover.

Conditions, Failure, and Rejection

An applicant for admission whose preparatory work in any department is found to be deficient is "conditioned" if his deficiency is not so great as to forbid his entering on the work of the class in that department.

An applicant whose deficiency in any department is so great as to forbid his taking college work in that department is reported as having "failed."

Applicants who "fail" or are "conditioned" in June may apply for re-examination in September.

Applicants who "fail" in any department in the September examinations will not be examined again for admission in that department until the next regular entrance examinations.

Applicants who stand conditioned at the close of the September examinations are required to remove their deficiencies at a time specified by the examiners. The Faculty may in any case require that the deficiencies be made up under a specified tutor.

An applicant for a regular course who has "failed" in the entrance requirements for any department in that course, will be refused admission to the course for which he applies.

An applicant who fails in any of *the minimum requirements for special students* (see page 38), or whose deficiencies are otherwise so great as to show that he cannot profitably pursue college work, will be "rejected," that is, refused admission to College in any capacity.

Certificates of Matriculation

Not later than the first Monday of the college year the Registrar will deliver to each applicant for admission who has been accepted a *certificate of matriculation,* with a memorandum of such conditions, if any, as have been recorded against the applicant. The newly admitted students are required to show their certificates of admission to each of their instructors at the first appointment after the first Monday of the college year. Those who fail to present certificates at the time required will be marked absent until their certificates are presented.

Admission to Advanced Standing

Candidates for advanced standing are required to meet the entrance requirements in the course which they wish to enter, and to pass examinations in all the subjects which have been pursued by the class to which they seek admission, or in others equivalent to them.

Students from other colleges whose entrance requirements are equal to those of this College, will be credited with work for which they bring an official record, indicating the number of hours devoted to each subject, and the standing attained. Students from other colleges are received only on presentation of letters of honorable dismissal from the colleges at which they have been in attendance.

Courses of Study for Bachelor's Degrees

Three courses of study, each extending through four years, are open to students of this College: the CLASSICAL COURSE, leading to the degree of Bachelor of Arts; the PHILOSOPHICAL COURSE, leading to the degree of Bachelor of Philosophy; and the SCIENTIFIC COURSE, leading to the degree of Bachelor of Science.

These undergraduate courses aim to furnish a liberal education. Each of them offers studies which will fit the students for the most advantageous pursuit of later special study, should they choose to enter any of the learned professions. The courses seek to give that breadth of culture which is secured by the combination of prescribed work with a large freedom in election of studies.

The unit employed in fixing the total requirements for graduation is the "hour of credit," which is equal to a course of one hour a week for one term. In laboratory courses at least two hours of attendance are required to gain one hour of credit; the general rhetorical work in Freshman elocution, Sophomore essays, Junior and Senior orations and debates is valued at one hour of credit for each term for the four years; and in physical training three hours of attendance a week throughout a year constitute three hours of credit.

The total requirement for the bachelor's degree in any course is 198 hours of credit, divided as follows:

1 Regular courses in class room or laboratory..... 180
2 General rhetorical work 12
3 Physical training 6

No student is permitted to take in any term less than ten hours nor more than twenty-two hours a week,—work in physical training being omitted in this reckoning. Each student is required to register with the proper class officer for the studies he proposes to pursue each term. Studies prescribed for his course must first be provided for, then elections may be chosen from the courses announced for the term, subject to any restrictions named in the description of the courses in this catalogue. The dates for the completion of such term registrations may be found in the calendar (page 152).

A student is enrolled as a Freshman until he has secured credit for at least thirty-four hours, and has removed all entrance conditions; then as a Sophomore until he has secured credit for at least eighty-one hours, including all the studies prescribed for his Freshman year; then as a Junior until he has secured credit for at least one hundred and thirty hours, including all the studies prescribed for his Sophomore year; then as a Senior until he has completed the full requirements for a bachelor's degree. The rating of students in accordance with these definitions is made for each year at the opening of the first term.

The following schedules indicate the work prescribed in the different bachelor's degree courses. Studies prescribed in each course must be taken in the order indicated unless the class officer advises otherwise, and they must be supplemented by elective studies sufficient to complete the work requisite for a degree.

THE CLASSICAL COURSE

PRESCRIBED STUDIES

In all courses Elocution 1, 2, 3, and Rhetoric 4, 5, 7, 8, 9, and physical training are prescribed, in addition to the 180 hours of credit required for a degree (see page 54).

English

Rhetoric 1, 2, 3.....2 hours each, Freshman I, II, III.
English 1, 2.....2 hours each, Sophomore I, II.
Mathematics 1, 2, 3, 4.....4, 4, 4, & 3 hours, Freshman I, II, III, Sophomore I.
Latin 1, 2, 3.....5 hours each, Freshman II, Sophomore I, III.
Greek 1, 2, 3,.....5 hours each, Freshman I, III, Sophomore II.
German 1, 2.....5 hours each, Freshman I, II.
French 1, 2.....5 hours each, Sophomore II, III.
Physics A, B.....5 and 2 hours, Sophomore I, II.

NOTE:—Physics B may be omitted by students who elect instead Physics 1, 2, or 3. If Physics was offered at entrance, Physics 1, 2, or 3 must be taken in place of A and B.

Chemistry 1.....5 hours, Sophomore III.
Biology 6, 5.....5 hours each, Junior I, II.
Geology 2.....5 hours, Junior III if not taken earlier by advice of class officer.
History 1, 2.....5 hours each, Junior I, II.
Economics 1.....5 hours, Junior III.
Philosophy 1, 2, 3.....5 hours, Senior I, II, III.

NOTE. Roman numerals following a year indicate the terms, first, second, and third.

SYNOPSIS—CLASSICAL COURSE

FRESHMAN YEAR

First Term	hours	page	Second Term	hours	page	Third Term	hours	page
Rhetoric 1	2	81	Rhetoric 2	2	81	Rhetoric 3	2	81
Mathematics 1	4	96	Mathematics 2	4	96	Mathematics 3	4	96
Greek 1	5	85	Latin 1	5	88	Greek 2	5	85
German 1	5	92	German 2	5	93	German 5	5	93
Elocution 1		83	Elocution 2		83	or Biology 4		105
Physical Training		118	Physical Training		118	Elocution 3		83
						Physical Training		118

SOPHOMORE YEAR

English 1	2	83	English 2	2	83	Latin 3	5	88
Mathematics 4	3	96	Greek 3	5	83	French 2	5	94
Latin 2	5	88	French 1	5	94	Chemistry	5	102
Physics A	5	99	Physics B[1]	2	99	Rhetoric 4		81
Rhetoric 4		81	*Elective*[1]			Physical Training		118
Physical Training		118	Rhetoric 4		81			
			Physical Training		118			

JUNIOR YEAR

History 1	5	111	History 2	5	112	Economics 1	5	114
Biology 6	5	105	Biology 5	5	105	*Electives*[2]	10	
Elective	5		*Elective*	5		Rhetoric 5		82
Rhetoric 7		82	Rhetoric 5 or 9		82			

SENIOR YEAR

Philosophy 1	5	115	Philosophy 2	5	115	Philosophy 3	5	116
Electives	10		*Electives*	10		*Electives*	10	
Rhetoric 8		82	Rhetoric 8 or 9		82			

In the year 1905–1906 this schedule will be modified for Seniors as follows:—Philosophy 2 and 3 will be given in the first and second terms; Philosophy 1, having been given to that class in second term Junior, will be omitted.

NOTE. Electives will be chosen from the schedule of courses for the several terms (pages 68–71), subject to restrictions named in connection with the several courses.

---

[1]Physics B may be omitted by students who elect Physics 1, 2, or 3. Mathematics 5 should be taken at this time by those who wish to take advanced mathematics.

[2]Geology 2 must be taken unless elected earlier.

THE PHILOSOPHICAL COURSE

PRESCRIBED STUDIES

In all courses Elocution 1, 2, 3, and Rhetoric 4, 5, 7, 8, 9, and physical training, are prescribed, in addition to the 180 hours of credit required for a degree (see page 54).

English
Rhetoric 1, 2, 3 ..... 2 hours each, Freshman I, II, III.
English 1, 2 ..... 2 hours each, Sophomore I, II.
Mathematics 1, 2, 3, 4 ..... 4, 4, 4, 3 hours, Freshman I, II, III, Sophomore I.
Latin 1, 2, 3 ..... 5 hours each, Freshman II, Sophomore I, III.
German 3, 5 ..... 5 hours each, Freshman I, III.
French 1, 2 ..... 5 hours each, Freshman II, III.
Physics 1, 2, or 3 ..... 5 hours, Sophomore I, II, or III.
Chemistry 1 ..... 5 hours, Sophomore III.
Biology 5, 6 ..... 5 hours each, Sophomore II, Junior I.
Geology 1, 2,
or 1, 3, 4 ..... 5 hours each, Junior II, III, or I, II, III.
History 1, 2 ..... 5 hours each, Junior I, II.
Economics 1 ..... 5 hours, Junior III.
Philosophy 1, 2, 3 ..... 5 hours each, Senior I, II, III.
Option between
Biology 1 and Old English 7, 5 hours, Freshman I.

NOTE. Roman numerals following a year indicate the terms, first, second, and third.

SYNOPSIS—PHILOSOPHICAL COURSE

FRESHMAN YEAR

First Term	hours	page	Second Term	hours	page	Third Term	hours	page
Rhetoric 1	2	81	Rhetoric 2	2	81	Rhetoric 3	2	81
Mathematics 1	4	96	Mathematics 2	4	96	Mathematics 3	4	96
German 3	5	93	Latin 1	5	88	German 5	5	93
Option	5		French 1	5	94	French 2	5	94
Old English 7		84	Elocution 2		83	Elocution 3		83
or Biology 1		104	Physical Training		118	Physical Training		118
Elocution 1		83						
Physical Training		118						

SOPHOMORE YEAR

English 1	2	83	English 2	2	83	Latin 3	5	88
Mathematics 4	3	96	Biology 5	5	105	Chemistry 1	5	102
Latin 2	5	88	*Electives*[2]	8 or 10		*Elective*	5	
Physics[1] 1	5	99	Rhetoric 4		81	Rhetoric 4		81
Rhetoric 4		81	Physical Training		118	Physical Training		118
Physical Training		118						

JUNIOR YEAR

History 1	5	111	History 2	5	112	Economics 1	5	114
Biology 6	5	105	Geology 1	5	108	*Electives*[3]	10	
Elective	5		*Elective*	5		Rhetoric 5		82
Rhetoric 7		82	Rhetoric 5 or 9		82			

SENIOR YEAR

Philosophy 1	5	115	Philosophy 2	5	115	Philosophy 3	5	116
Electives	10		*Electives*	10	82	*Electives*	10	
Rhetoric 8		82	Rhetoric 8 or 9					

In the year 1905-1906 this schedule will be modified as follows:—Sophomores will take French 2 in place of Physics 1 in the first term, and must then take Physics 1, 2, or 3 at the first opportunity to elect the course preferred. Philosophy 2 and 3 will be given to Seniors in the first and second terms, and Philosophy 1 will be omitted.

NOTE. Electives will be chosen from the schedule of courses for the several terms (pages 68–71), subject to restrictions named in connection with the several courses.

---

[1]One course in Physics is required, either Physics 1, 2, or 3, at the student's option.

[2]Mathematics 5 should be taken at this time by those who wish to take advanced mathematics.

[3]Geology 2 is prescribed unless 3 and 4 are elected instead.

THE SCIENTIFIC COURSE

PRESCRIBED STUDIES

In all courses Elocution 1, 2, 3, and Rhetoric 4, 5, 7, 8, 9, and physical training are prescribed, in addition to the 180 hours of credit required for a degree (see page 54).

The Scientific course is arranged in four groups. In each group one of the four sciences—chemistry, physics, biology, geology—is taken as the major study, and the group prescribes most of the work offered by the college in that science. Each group prescribes also a minimum of work in other sciences than the major, and in general culture studies.

Studies common to all groups in the Scientific course—72 hours:

English
Rhetoric 1, 2, 3 ..2 hours each, Freshman I, II, III.
English 1, 2 .....2 hours each, Sophomore I, II.

Mathematics 1, 2, 3, 4: 4, 4, 4, 3 hours, Freshman I, II, III, Sophomore I.

German 3, 4 .....5 hours each, Freshman I, II.

French 3, 4 .....5 and 2 hours, Freshman III, Sophomore I.

History 1, 2 .....5 hours each, Junior I, II.

Economics 1 .....5 hours, Junior III.

Philosophy 1, 2, 3 ..5 hours each, Senior I, II, III.

GROUP A. CHEMISTRY AS MAJOR

Additional prescribed studies

Chemistry, six terms,5 hours each, Freshman III, Sophomore I, II, III, Junior II, III.

Physics 1, 2, 3 .....5 hours each, Sophomore I, II, III.

Biology 1, 5, 6 .....5 hours each, Freshman I, II, Junior I.

Geology 3 .....5 hours, Junior I.

Studies recommended but not prescribed

Chemistry .....5 hours a term, throughout the Senior year.

Physics 10 .....5 hours, Junior I.

Biology 7 .....5 hours, Junior III or Senior III.

Geology 4 or 7 .....5 hours, Senior I, III.

NOTE. Roman numerals following a year indicate the terms, first, second, and third.

SYNOPSIS—SCIENTIFIC COURSE

GROUP A. CHEMISTRY AS MAJOR

FRESHMAN YEAR

First Term	hours	page	Second Term	hours	page	Third Term	hours	page
Rhetoric 1	2	81	Rhetoric 2	2	81	Rhetoric 3	2	81
Mathematics 1	4	96	Mathematics 2	4	96	Mathematics 3	4	96
German 3	5	93	German 4	5	93	French 3	5	94
Biology 1	5	104	Biology 5	5	105	Chemistry 1	5	102
Elocution 1		83	Elocution 2		83	Elocution 3		83
Physical Training		118	Physical Training		118	Physical Training		118

SOPHOMORE YEAR

English 1	2	83	English 2	2	83	Chemistry 4	5	102
Mathematics 4	3	96	Chemistry 3	5	102	Physics 2	5	99
French 4	2	94	Physics 3	5	99	*Elective*	5	
Chemistry 2	5	102	*Elective*	5		Rhetoric 4		81
Physics 1	5	99	Rhetoric 4		81	Physical Training		118
Rhetoric 4		81	Physical Training		118			
Physical Training		118						

JUNIOR YEAR

History 1	5	111	History 2	5	112	Economics 1	5	114
Biology 6	5	105	Chemistry 5	5	103	*Chemistry*	5	103
Geology 3	5	109	*Physics* 10	5	101	*Biology* 7	5	106
Rhetoric 7		82	Rhetoric 5 or 9		82	Rhetoric 5		82

SENIOR YEAR

Philosophy 1	5	115	Philosophy 2	5	115	Philosophy 3	5	116
Chemistry	5	103	*Chemistry*	5	103	*Chemistry*	5	103
Geology[1] 7	5	110	*Elective*	5		*Elective*	5	
Rhetoric 8		82	Rhetoric 8 or 9		82			

[1]Geology 4, third term, may be elected instead of Geology 7.

NOTE. Electives will be chosen from the schedule of courses for the several terms (pages 68–71), subject to restrictions named in connection with the several courses.

☞ *In the year 1905-1906 French 3 must be taken by Sophomores in the third term, Biology 6 will be omitted in the first term Junior, Philosophy 2 and 3 must be taken by Seniors in the first and second terms, Philosophy 1 will be omitted.*

These requirements take precedence over the subjects scheduled above for the corresponding terms, and necessary adjustments will be made for each student by the class officer.

SCIENTIFIC COURSE

GROUP B. PHYSICS AS MAJOR

Studies common to all scientific groups, as above (page 60).

Additional prescribed studies

Physics 1, 2, 3, 4, 6, 7 ..... 5 hours each, Sophomore I, II, III, Junior I, II.
5 ..... a total of 10 hours in Junior and Senior years.
Mathematics 5, 6 ..... 5 hours each, Sophomore II, III.
Chemistry 1, 2, 3 ..... 5 hours each, Freshman III, Sophomore I, II.
Biology 5, 6 ..... 5 hours each, Freshman II, Junior I.
Geology 3, 5 ..... 5 and 3 hours, Senior I, II.

Studies recommended but not prescribed

Mathematics 7, 8, 9..... 5 hours each, Junior I, II, III.
Physics 8, 9, 10 ..... 3, 5, and 5 hours, Junior III, Senior I, II.
Astronomy ..... 5 hours, Senior III.

NOTE. Roman numerals following a year indicate the terms, first, second, and third.

Pretechnical Studies. Students who elect Group B may prepare for the combined six year college and technical course, in this college and such technical schools as Massachusetts Institute of Technology or Sibley College in Cornell University, by modifying the studies of the group as follows:

Mathematics 7, 8, 9 and 12 must be taken in Junior I, II, III and Senior III.

Physics 8, 10 and Astronomy may be omitted, and Biology 6 may be taken in Senior I.

Geology 5 may be omitted and Geology 2, Senior III, substituted for Geology 3, Senior I.

Mechanical Drawing, 12 hours, and Shop Work, 9 hours, must be taken at the Mechanics Institute at some time during the course—preferably the earlier part. This work includes that recommended for this group in Freshman I.

SYNOPSIS—SCIENTIFIC COURSE

GROUP B. PHYSICS AS MAJOR

FRESHMAN YEAR

First Term	hours	page	Second Term	hours	page	Third Term	hours	page
Rhetoric 1	2	81	Rhetoric 2	2	81	Rhetoric 3	2	81
Mathematics 1	4	96	Mathematics 2	4	96	Mathematics 3	4	96
German 3	5	93	German 4	5	93	French 3	5	94
Mechanical Drawing	5	101	Biology 5	5	105	Chemistry 1	5	102
Elocution 1		83	Elocution 2		83	Elocution 3		83
Physical Training		118	Physical Training		118	Physical Training		118

SOPHOMORE YEAR

English 1	2	83	English 2	2	83	Mathematics 6	5	96
Mathematics 4	3	96	Mathematics 5	5	96	Physics 2	5	99
French 4	2	94	Physics 3	5	99	Physics 4	5	99
Physics 1	5	99	Chemistry 3	5	102	Rhetoric 4		81
Chemistry 2	5	102	Rhetoric 4		81	Physical Training		118
Rhetoric 4		81	Physical Training		118			
Physical Training		118						

JUNIOR YEAR

History 1	5	111	History 2	5	112	Economics 1	5	114
Physics 6	5	100	Physics[1] 5		100	Physics 5	5	100
Biology 6	5	105	Physics 7	5	100	*Physics* 8	5	101
Mathematics 7	5	97	*Mathematics* 8	5	97	*Mathematics* 9	5	97
Rhetoric 7		82	Rhetoric 5 or 9		82	Rhetoric 5		82

SENIOR YEAR

Philosophy 1	5	115	Philosophy 2	5	115	Philosophy 3	5	116
Physics 10	5	101	*Physics* 9	5	101	*Astronomy*	5	101
Geology 3	5	109	Geology 5	3	110	*Elective*	5	
Rhetoric 8		82	Rhetoric 8 or 9		82			

NOTE. Electives will be chosen from the schedule of courses for the several terms (pages 68–71), subject to restrictions named in connection with the several courses.

☞ *In the year 1905-1906 French 3 must be taken by Sophomores in the third term. Biology 6 will be omitted in the first term by Juniors. Philosophy 2 and 3 must be taken by Seniors in the first and second terms, Philosophy 1 will be omitted.*

These requirements take precedence over the subjects scheduled above, and necessary adjustments will be made for each student by the class officer.

---

[1]Ten hours in physical measurements (Physics 5) are required for this group during the college course.

SCIENTIFIC COURSE

GROUP C. BIOLOGY AS MAJOR

Studies common to all groups in the Scientific course—72 hours:

English
Rhetoric 1, 2, 3.....2 hours each, Freshman I, II, III.
English 1, 2.....2 hours each, Sophomore I, II.
Mathematics 1, 2, 3, 4.....4, 4, 4, 3 hours, Freshman I, II, III, Sophomore I.
German 3, 4.....5 hours each, Freshman I, II.
French 3, 4.....5 and 2 hours, Freshman III, Sophomore I.
History 1, 2.....5 hours each, Junior I, II.
Economics 1.....5 hours, Junior III.
Philosophy 1, 2, 3.....5 hours each, Senior I, II, III.

Additional prescribed studies

Biology 1, 2, 3, 5, 6, 7.....5 hours each, Freshman I, II, Sophomore II, Junior I, III.
Biology 4 .....3 hours, Freshman III.
Chemistry 1, 2, 3 .....5 hours each, Freshman I, Sophomore I, II.
Physics 1, 2, 3 .....5 hours each, Sophomore I, II, III.
Geology 2, 5..... 5 and 3 hours, Junior II, III.
Geology 3 and 4 may be taken instead of Geology 2.

Studies recommended but not prescribed

Biology 4a, 13 .....3 hours each, Sophomore III, Senior III.
8, 9, 10, 11, 12 ....5 hours each, Junior I, II, Senior I, II, III.

NOTE. Roman numerals following a year indicate the terms, first, second, and third.

SYNOPSIS—SCIENTIFIC COURSE

GROUP C. BIOLOGY AS MAJOR

FRESHMAN YEAR

First Term	hours	page	Second Term	hours	page	Third Term	hours	page
Rhetoric 1	2	81	Rhetoric 2	2	81	Rhetoric 3	2	81
Mathematics 1	4	96	Mathematics 2	4	96	Mathematics 3	4	96
German 3	5	93	German 4	5	93	French 3	5	94
Biology 1	5	104	Biology 2	5	104	Chemistry 1	5	102
Elocution 1		83	Elocution 2		83	Biology 4	3	105
Physical Training		118	Physical Training		118	Elocution 3		83
						Physical Training		118

SOPHOMORE YEAR

English 1	2	83	English 2	2	83	Biology 3	5	104
Mathematics 4	3	96	Biology 5	5	105	Physics 2	5	99
French 4	2	94	Chemistry 3	5	102	*Biology 4a*	3	105
Chemistry 2	5	102	Physics 3	5	99	Rhetoric 4		81
Physics 1	5	99	Rhetoric 4		81	Physical Training		118
Rhetoric 4		81	Physical Training		118			
Physical Training		118						

JUNIOR YEAR

History 1	5	111	History 2	5	112	Economics 1	5	114
Biology 6	5	105	*Biology 9*	5	106	Biology 7	5	106
Biology 8	5	106	Geology 5	3	110	*Elective*[1]	5	
Rhetoric 7		82	Rhetoric 5 or 9		82	Rhetoric 5		82

SENIOR YEAR

Philosophy 1	5	115	Philosophy 2	5	115	Philosophy 3	5	116
Biology 10	5	106	*Biology 11*	5	107	*Biology 13*	3	107
Elective	5		*Elective*	5		*Elective*	5	
Biology 12	5	107	Rhetoric 8 or 9		82			
Rhetoric 8		82						

NOTE. Electives will be chosen from the schedule of courses for the several terms (pages 68–71), subject to restrictions named in connection with the several courses.

☞ *In the year 1905-1906 French 3 must be taken by Sophomores in the third term. Biology 6 will be omitted in the first term by Juniors. Philosophy 2 and 3 must be taken by Seniors in the first and second terms, Philosophy 1 will be omitted.*

These requirements take precedence over the subjects scheduled above, and necessary adjustments will be made for each student by the class officer.

---

[1]Geology 2 or Geology 3 and 4 (Senior I, III) prescribed.

SCIENTIFIC COURSE

GROUP D. GEOLOGY AS MAJOR

Studies common to all groups in the Scientific course—72 hours:

English

Rhetoric 1, 2, 3.....2 hours each, Freshman I, II, III.
English 1, 2.....2 hours each, Sophomore I, II.
Mathematics 1, 2, 3, 4.....4, 4, 4, 3 hours, Freshman I, II, III, Sophomore I.
German 3, 4.....5 hours each, Freshman I, II.
French 3, 4.....5 and 2 hours, Freshman III, Sophomore I.
History 1, 2.....5 hours each, Junior I, II.
Economics 1.....5 hours, Junior III.
Philosophy 1, 2, 3.....5 hours each, Senior I, II, III.

Additional prescribed studies

Geology 1, 3, 4 .....5 hours each, Sophomore II, Junior I, III.
5, 6 .....3 and 2 hours, Junior II.
Chemistry 1, 2, 3 .....5 hours each, Freshman I, Sophomore I, II.
Physics 1, 2, 3 .....5 hours each, Sophomore I, II, III.
Biology 1, 5 .....5 hours each, Freshman I, II.
4, 4a .....3 hours each, Sophomore III.

Studies recommended but not prescribed

Geology 7, 8, 9, 10, 11.....5 hours each, Senior I, II, III.

Two of these courses *must* be taken.

NOTE. Roman numerals following a year indicate the terms, first, second, and third.

SYNOPSIS—SCIENTIFIC COURSE

GROUP D. GEOLOGY AS MAJOR

FRESHMAN YEAR

First Term	hours	page	Second Term	hours	page	Third Term	hours	page
Rhetoric 1	2	81	Rhetoric 2	2	81	Rhetoric 3	2	81
Mathematics 1	4	96	Mathematics 2	4	96	Mathematics 3	4	96
German 3	5	93	German 4	5	93	French 3	5	94
Biology 1	5	104	Biology 5	5	105	Chemistry 1	5	102
Elocution 1		83	Elocution 2		83	Elocution 3		83
Physical Training		118	Physical Training		118	Physical Training		118

SOPHOMORE YEAR

English 1	2	83	English 2	2	83	Physics 2	5	99
Mathematics 4	3	96	Geology 1	5	108	Biology 4	3	105
French 4	2	94	Chemistry 3	5	102	Biology 4a	3	105
Chemistry 2	5	102	Physics 3	5	99	*Elective*	5	
Physics 1	5	99	Rhetoric 4		81	Rhetoric 4		81
Rhetoric 4		81	Physical Training		118	Physical Training		118
Physical Training		118						

JUNIOR YEAR

History 1	5	111	History 2	5	112	Economics 1	5	114
Biology 6	5	105	Geology 5	3	110	Geology 4	5	109
Geology 3	5	109	Geology 6	2	110	*Elective*	5	
Rhetoric 7		82	*Elective*	5				
			Rhetoric 5 or 9		82			

SENIOR YEAR

Philosophy 1	5	115	Philosophy 2	5	115	Philosophy 3	5	116
Geology[1] 7	5	110	*Geology*[1] 8	5	111	*Geology*[1] 9	5	111
Geology[1] 11	5	111	*Elective*	5		*Geology*[1] 10	5	111
Rhetoric 8		82	Rhetoric 8 or 9		82			

☞ ***In the year 1905–1906 French 3 must be taken by Sophomores in the third term. Biology 6 will be omitted in the first term by Juniors. Philosophy 2 and 3 must be taken by Seniors in the first and second terms, Philosophy 1 will be omitted.***

These requirements take precedence over the subjects scheduled above, and necessary adjustments will be made for each student by the class officer.

NOTE.—Electives will be chosen from the schedule of courses for the several terms (pages 68–71), subject to restrictions named in connection with the several courses. Subjects italicized are recommended but not prescribed.

[1]Two courses must be selected from Geology 7, 8, 9, 10, 11; 7 and 8 are given with chemical emphasis, 8 and 11 with physical emphasis, and 9 and 10 with biological emphasis.

SCHEDULE OF ALL COURSES OFFERED

FIRST TERM

Biology 1, Practical: the Biology of the Cell, p. 104.
6, Physiology, p. 105.
8, Histology, p. 106.
10, Plant Morphology, p. 106.
12, Fungi and Fungous Diseases of Plants (3), p. 107.
Chemistry 2, Qualitative Analysis, p. 102.
3, Quantitative Analysis, p. 102.
Elocution 1, The Theory of Elocution (1), p. 83.
English 1, English Literature (2), p. 83.
7, Old English (Anglo-Saxon) Prose and Poetry, p. 84.
10, General and Comparative Literature and the Development of English Prose, p. 84.
11, Recent English and American Poetry, p. 85.
French 4, Scientific French (2), p. 94.
5, French Drama, p. 94.
7, Old French (1), p. 95.
Geology 3, Physical, p. 109.
7, Economic Geology, p. 110.
11, Glacial Geology, p. 111.
German 1, Elementary German a, p. 92.
3, Schiller, p. 93.
9, German Comedy (1), p. 94.
Greek 1, Lysias or Herodotus, p. 85.
7, Plato, p. 86.
8, Aristotle, p. 86.
11, Greek Reading, p. 87.
History 1, Middle Ages, p. 111.
3, Constitutional Law, p. 112.
Italian 1, Elementary Italian, p. 95.
Latin 2, Horace, p. 88.
4, Catullus, Tibullus, and Propertius, p. 89.
5, Latin Rhetoricians, p. 89.
10a, Epigraphy (3), p. 90.
13, Sight Reading, p. 91.
Mathematics 1, Advanced Algebra (4), p. 96.
4, Analytical Geometry, (3), p. 96.
7a, Advanced Analytics, b, Differential Equations, p. 96.
10, Differential Equations, p. 97.
14, Short Courses (1), p. 98.
Philology 3, Comparative (2), p. 92.
Philosophy 1, Elementary Psychology, p. 115.
4, Introduction to Philosophy (Metaphysics), p. 116.
Physics A, General Course, p. 99.

1, Mechanics and Heat, p. 99.
5, Physical Measurements, p. 100.
6, Alternating Currents, p. 100.
10, Electro-chemistry, p. 101.

Rhetoric 1, Elementary Style (2), p. 81.
4, English Composition (1), p. 81.
6, Daily Themes and Prose Styles (2), p. 82.
7, Class Room Debates, p. 82.
8, Senior Orations, p. 82.

Spanish 1, Elementary, p. 95.

SECOND TERM

Biology 2, Practical Biology: the Biology of the Animal, p. 104.
5, General Zoölogy, p. 105.
9, Embryology, p. 106.
11, Plant Physiology, p. 107.

Biblical Literature 2, The Life and Writings of Paul (2), p. 118.

Chemistry 2, Qualitative Analysis, p. 102.
3, Quantitative Analysis, p. 102.
5, Organic, p. 103.

Elocution, Practical Training (1), p. 83.

English 2, English Literature (2), p. 83.
5, American Literature (3), p. 84.
6, Shakspere (2), p. 84.
8, Béowulf (3), p. 84.

French 1, Elementary French a, p. 94.
6, Advanced Composition (3), p. 94.
7. Old French (1), p. 95.

Geology 1, Elementary Mineralogy and Petrology, p. 108.
5, Meteorology (3), p. 110.
6, Physiography (2), p. 110.
8, Advanced Physical, p. 111.

German 2, Elementary German b, p. 93.
4, Scientific German, p. 93.
6, Goethe, Selections, p. 93.
7, Goethe, Faust, p. 93.
9, German Comedy (1), p. 94.

Greek 3, Plato, p. 85.
9, Hellenistic Greek, p. 87.
10, Greek Archæology, p. 87.
11, Greek Reading, p. 87.

History 2, Modern States System, p. 112.
4, History and Principles of the Roman Law, p. 112.

History of Art 1, Italian Art (3), p. 119.

Italian 2, Select Readings, p. 95.

Latin 1, Livy, p. 88.
6, Roman Philosophy, p. 89.
10 b, Latin Palæography (1), p. 90.
11, Historical Latin Grammar, p. 91.
13, Sight Reading, p. 91.
Mathematics 2, Plane and Spherical Trigonometry (4), p. 96.
5, Differential Calculus, p. 96.
8, Analytical Mechanics, p. 97.
11, Advanced Integral Calculus, p. 97.
14, Short Courses (1), p. 98.
Philology 1, Sanskrit Grammar, pp. 92.
Philosophy 2, Logic, p. 115.
6, History of Modern Philosophy, p. 116.
7, Institutes of Education, p. 117.
9, Readings in Philosophy (1), p. 117.
Physics B, General Laboratory (2), p. 99.
3, Electricity, p. 99.
5, Physical Measurements, p. 100.
7, Electrical Measurements, p. 100.
9, Theory of Electricity, p. 101.
Rhetoric 2, Expository Composition (2), p. 81.
4, English Composition, p. 81.
5, Junior Essay Work, p. 82.
8, Orations, p. 82.
9, Advanced Work in Debate (1), p. 82.
Spanish 2, Select Readings, p. 95.

THIRD TERM

Astronomy, p. 101.
Biblical Literature 2, The Life and Writings of Paul (2), p. 118.
Biology 3, Practical Biology, p. 104.
4, General Botany, p. 105.
4a, Systematic Botany (3), p. 105.
7, Bacteriology, p. 106.
13, Physiological, Anatomy of Plants (3), p. 107.
Chemistry 1, Theoretical and Descriptive Instruction, p. 102.
3, Quantitative Analysis, p. 102.
4, Quantitative Analysis, p. 102.
Elocution 3, Class Room Declamations (1), p. 83.
English 3, English Poetry from Spenser to Wordsworth, p. 83.
4, Chaucer (3), p. 84.
9, Cynewulf (3), p. 84.
French 2, Elementary French b, p. 94.
3, Modern French Prose and Poetry, p. 94.
7, Old French (1), p. 95.

Geology 2, Elementary Geology, p. 108.
4, Historical (Stratigraphical) Geology and Paleontology, p. 109.
9, Advanced Historical Geology, p. 111.
10, Paleontological Geology, p. 111.
German 5, Lessing, p. 93.
8, Advanced Composition, p. 93.
9, German Comedy (1), p. 94.
Greek 2, Euripides, p. 85.
4, Lyric Poets, p. 86.
5, Demosthenes, p. 86.
6, Greek New Testament, p. 86.
11, Greek Reading, p. 87.
History 5, International Law and Diplomacy, p. 113.
Italian 3, Classic Prose and Poetry (3), p. 95.
Latin 3, Tacitus and Juvenal, p. 88.
7, Plautus and Terence, p. 90.
8, Teachers' Course, p. 90.
9, Advanced Composition, p. 90.
12, Roman Topography and Architecture, p. 91.
13, Sight Reading, p. 91.
Mathematics 3, Solid and Spherical Geometry (4), p. 96.
6, Integral Calculus, p. 96.
9, Analytical Mechanics continued, p. 97.
12, Vector Analysis, p. 98.
13, Descriptive Geometry, p. 98.
14, Short Courses (1), p. 98.
Philology 2, Sanskrit Readings (2), p. 92.
Philosophy 3, Elementary Ethics, p. 116.
8, History of Education, p. 117.
9, Readings in Philosophy (1), p. 117.
Physics 2, Sound and Light, p. 99.
4, Dynamo and Motor, p. 99.
5, Physical Measurements, p. 100.
8, Practical Photography (3), p. 101.
Political Economy 1, General Economics, p. 114.
and
2, Special Economic Topics, p. 114.
Rhetoric 3, Argumentative Composition (2), p. 81.
4, English Composition, p. 81.
5, Junior Essay Work, p. 81.
Spanish 3, Classic Prose and Poetry (3), p. 95.

Special Students

Students who desire to receive instruction in particular departments without becoming candidates for a degree are admitted, if they have sufficient preparation to profit by the instruction given in the subjects which they propose to take; their fitness may be determined either by examination or by the presentation of certificates in the *minimum entrance requirement* indicated on page 38.

Special students are all subject to the general regulations of the College relating to registration, presentation of certificates, time of entrance examinations, attendance, time and method of election of studies, term and delinquent examinations, and the use of the library.

Special students pay the full tuition and incidental fee, and the laboratory fees attaching to any courses they choose to take.

An applicant for admission as a special student who has recently been a student in a preparatory school will be received only on the written recommendation of the Principal of the school.

Special students, in the first two years of their attendance at the College, are expected to take the Freshman courses in elocution (see page 83) and the prescribed work in physical training (see page 118). Their other studies are to be chosen for each term in the manner prescribed for the choice of elective studies by regular students. A member of the Faculty, designated as the adviser of special students, will counsel with such students concerning their selection of studies for each term.

If a special student "fails" or is "conditioned" in two courses in any term, or if at any time a special student has an accumulation of three delinquencies recorded against him, his connection with the College is thereby terminated.

Preparation for Professional Study

The College aims to furnish a liberal education rather than to train specialists. It is widely acknowledged that a general culture offers the best basis of broad knowledge and discipline on which to build a thorough special training. The curriculum is so arranged, however, that students who wish to do so may gain the bachelor's degree by the election of many studies which contribute to their later professional work.

Theology, Law, and Journalism are professions in which such early specialization is least desirable. A broad knowledge, particularly in lines not closely akin to later work, is here of supreme importance. The best preparation will be secured by a generous election of work in philosophy, history—especially Roman, constitutional, and international law—economics, literature and science. For certain other professions early specialization has some advantages. The opportunities offered to such students are therefore enumerated more particularly.

Studies Preparatory to Medicine. Students who intend to enter the medical profession will find it to their advantage, if, in addition to their prescribed college work, they elect such courses in physics, chemistry, and biology as may correspond to work prescribed in the medical school they expect to enter. Among such studies preparatory to medicine offered in this College are the following:—In the department of Physics, the various courses in electricity; in the department of Chemistry, qualitative and quantitative analysis, pharmaceutical and medical chemistry, including urinary analysis, toxicology, and sanitary chemistry; in the

department of Biology, practical biology, physiology, and general botany, general zoölogy, bacteriology, human and comparative histology.

The matter of adjusting the college curriculum and the medical school curriculum so as to make possible a saving of one year in a combined college and medical course is at present receiving the attention of the Educational Department of the State of New York. At present pre-medical studies taken in college make it possible for the student to take advanced optional work in the medical schools, so enriching his educational opportunity.

Studies Preparatory to Engineering. The best education for civil, mechanical, and electrical engineers—leaders in the technical professions being the judges—is one in which a course of liberal culture in college precedes the special training of the technical school. The long time which seems to be requisite, however, for securing both the liberal and the technical education deters many young men from seeking this best preparation for a life work.

The course of study in any technical school of the highest grade includes many subjects which are taught also in colleges of liberal arts; such for instance, as mathematics, physics, chemistry, modern languages, economics, and similar studies. A man cannot become a competent engineer without them, and yet they have a more or less remote relation to the strictly technical preparation for his work.

In view of this fact a modification of the physics group in the scientific course has been arranged for pre-technical students (see note on page 63), which will include all the non-technical work in physics, mathematics, chemistry, and other college subjects, which is taught in the technical schools of highest grade. In connection with this group arrangements have been made for instruction in mechanical drawing and woodwork at the Mechanics Institute in Rochester during the college course.

Students who choose and successfully complete these pre-technical studies, will be fitted to enter the third year in the technical schools of the highest grade, and so may win both a college and a technical degree in six years.[1] A student who desires to follow these pre-technical studies, must enter the physics group in the scientific course (see page 62), and must declare his wish not later than the close of the Sophomore year. A less rigidly prescribed arrangement of studies, which may be taken by students in any of the college courses, will readily effect a saving of one year in a combined college and technical education—securing both the degrees in a total course of seven years from the time of admission to college. *For those whose age and circumstances permit it, such a seven year course is strongly recommended.* It is believed that for many, however, the six year combined course will open an opportunity to secure a thorough and a broad education with the greatest practical economy of time.

A Teachers' Training Department, approved by the State Education Department, has been established in the College for the benefit of those who desire to fit themselves for teaching in the public schools of this State. Students who, upon graduation, have completed the courses prescribed for this department, are entitled to receive the College Graduate Professional Certificate without examination. Candidates for this certificate are required to elect in addition to the prescribed courses in philosophy, the courses in the institutes of education (philosophy 7) and the history of education (philosophy 8).

---

[1] The Massachusetts Institute of Technology, Sibley College in Cornell University, and the School of Applied Science in Columbia University have approved this group of pre-technical studies, as fitted to prepare a man for the advanced standing named above.

Application for registration in this department should be made to the Registrar not later than the end of the Junior year, and the regulations require that a list of the students registered each year shall be forwarded to the Commissioner at the beginning of the year.

The Manual Training Normal Course. Inasmuch as there is an increasing demand for college graduates who are competent to teach manual training in high and grammar schools, arrangements have been made with the Mechanics Institute of Rochester by which it is possible to offer a Normal Course in manual training recognized by the State Education Department. This manual training course may be taken in one year of post-graduate work by graduates from the Teachers' Training Department in this College, or it may be taken during the college course by those who elect the necessary work in this College and in the Mechanics Institute.

TEACHERS' REGISTER

The Faculty endeavors to assist the authorities of schools and colleges in securing desirable teachers by recommending graduates and students of this College who are known to be competent and successful. A register is kept of all former students who are engaged in teaching, which contains much accurate information regarding their qualifications and professional record.

Every graduate or former student of the College who is a teacher is requested (1) to furnish for the use of the Faculty full information concerning his past record (a blank indicating the items desired will be forwarded on application to the Registrar), together with copies of testimonials regarding his work; (2) to send to the Registrar from time to time information respecting changes in his work as a teacher, with particulars as to place of residence, nature of

his position, subjects taught, salary, etc.; (3) to notify the Faculty (addressing the President) of his desire to obtain a new engagement, specifying the grade of position sought, subjects of instruction preferred, salary expected, etc.; (4) to furnish to the Faculty, on leaving a position, or on giving notice of his desire to obtain a new appointment, copies of testimonials regarding his work, signed if possible by persons known to some one of the Faculty or by official representatives of the school in which he has taught. All information given and all documents furnished are kept on file for the exclusive use of the Faculty in the recommendation of teachers.

Governing boards of schools and colleges are invited to communicate with the Faculty (addressing the President), when they are in search of a teacher, specifying the grade of the position, the qualities most demanded in its occupant, the studies to be taught, the salary offered, etc.

When informed of a vacancy the Faculty will promptly nominate the man whom they judge to be best fitted for the place, preference being given to one who is known to be in search of such a position, and will notify him of their action. In like manner when notified by a graduate or student that he is an applicant for a given place and desires the endorsement of the Faculty, full information and advice regarding his fitness for the position will be furnished at once to the person designated by the applicant.

No charge is made for any service rendered in the recommendation of teachers.

Courses for Master's Degrees

Eligibility. Graduates of this college are eligible to the degree of Master of Arts, and Bachelors of Science are eligible to the degree of Master of Science, upon the fulfilment of the conditions named below. Whenever it is thought necessary, the candidate must give additional evidence of his ability to use the French, German, and Latin languages. Graduates of other reputable colleges may be registered for the master's degree by special vote of the Faculty.

Residence. Candidates for the advanced degree should pursue their studies in residence; graduates of this College may, however, do the work *in absentia.* Resident students may complete their work in one year. Non-residents are expected to devote to it at least two years, receiving the degree at the second Commencement after the date of their registration; but the time may be extended by vote of the Faculty.

Graduate Courses. The graduate courses offered in each department will be found mentioned in the proper place in this catalogue. Fuller information may be had on application to the Registrar. Each graduate course is equivalent in amount to one exercise a day for one collegiate year. There are required for a master's degree three graduate courses, which may be taken from one, two or three departments, but must be so related as to give proper unity to the student's work. The student is also required to prepare a thesis upon a subject connected with one of his three courses.

Registration. Persons desiring to become candidates for master's degrees may obtain at any time during the year from the Registrar a blank form of application, calling for

statements regarding the courses which the candidate wishes to take, with designation of the course in connection with which he will write his thesis. This application should be completely filled out and returned to the Registrar. The application will be referred as soon as received, to a committee consisting of the professors in charge of the departments in which the applicant desires to study, who will promptly consider his plan of work and communicate to him all necessary suggestions and criticisms. When the applicant's course is fully arranged, the committee will report to the Faculty the titles of his courses, as finally approved by them, together with a description of each course. If the plan of work is endorsed by the Faculty, the applicant is then registered as a candidate for the master's degree.

Supervision. Graduate work is pursued under the direction of the professors in charge of the departments to which the student's courses belong. Non-resident students are required to report regarding the progress of their work to each professor in whose department they are studying at such times as he shall direct, such reports to be made at least once in each term.

Thesis. The subject of the thesis is to be agreed upon between the student and the professor to whose department the thesis course belongs, and must be reported by the professor to the Registrar for record, before the end of the first term in the case of resident students; in the case of non-residents, before the end of the first year. The thesis must be submitted to the professor at least one month before Commencement, in printed or typewritten form, on paper of thesis size (8 x 10½ inches), bound according to the Librarian's specifications, and if accepted will be deposited in the college library, where it will be open to public inspection. The thesis must have a table of contents and contain a list of authorities consulted.

Examinations. The examination in each course is taken at such time as the professor in charge shall direct, but all examinations must be completed before the last faculty meeting of the year in which the degree is to be taken. All examinations are public, the time and subject being duly posted on the college bulletin board. When the student's thesis is approved and he has passed all examinations, the Faculty recommend to the Trustees the conferring of the degree. The regular time for this action is the last faculty meeting of the college year.

Fees. The fees for master's courses are as follows: Registration, $5.00, payable when the application is forwarded to the Registrar. Tuition, $75.00, payable in three instalments; in the case of residents, at the beginning of each term, under the same regulations as undergraduate tuition; in the case of non-residents, at the beginning of the first year, at the beginning of the second year, and at the completion of the course. Diploma, $10.00, payable when the conferring of the degree has been recommended by the Faculty. Laboratory fees will be proportioned to the cost of materials consumed and use of apparatus. The master's degree will not be conferred upon the candidate until all his fees have been paid, or satisfactory arrangement has been made with the Treasurer for their payment.

The Departments of Instruction

RHETORIC

Professor GILMORE and Assistant Professor GRAY

1 **Rhetoric and Composition.** The structure and the style of typical examples of narration and description are examined in detail to acquire the elementary principles of narrative and descriptive art. Practice in composition is obtained in short weekly themes on subjects suggested by experience and observation.

Professor Gray, 2 hours. I.
Prescribed for all Freshmen.

2 **Expository Composition.** The course consists in a detailed study of the structure and the style of typical specimens of exposition; the making of an outline based on a masterpiece of exposition; and the collection and arrangement of material for composition; fortnightly essays, and consultations.

Rhetoric 1 prerequisite.
Professor Gray, 2 hours. II.
Prescribed for all Freshmen.

3 **Argumentative Composition.** The structure and the style of typical arguments are analyzed and the elementary principles of argumentation discussed. One brief is required, based on a masterpiece of argumentation; also two essays, preceded by briefs, followed by consultations.

Rhetoric 1 and 2 prerequisite.
Professor Gray, 2 hours. III.
Prescribed for all Freshmen.

4 **English Composition.** Three essays (800 to 1200 words). Each student meets the instructor in person by appointment and discusses his essay in detail with him.

Professor Gray, I, II, III.
Prescribed for all Sophomores.

5 **Junior Essay Work.** An essay of not less than 800 nor more than 1200 words—the theme to be chosen from a list to be submitted to each class—is required of each member of the Junior class during the second term and another during the third term. These essays will be revised by their authors after defects and possibilities of improvement have been pointed out.

Professor Gilmore, II, III.
Prescribed for all Juniors.

6 **Daily Themes and Prose Style,** advanced course. This course aims to train students (1) in clearness, facility, and individuality of expression; (2) in perceiving and appreciating those qualities in the best books. Frequent practice in various kinds of composition is given with personal consultations; and several selections from such writers as Arnold, Newman, Ruskin, and Stevenson are studied somewhat in detail, with lectures and discussions.

Professor Gray, 2 hours. I.
Rhetoric 1, 2, 3, 4, prerequisite.

7 **Class Room Debates**—participation in which is required of each candidate for a degree. In connection with these debates practical instruction is given in argumentation, with special attention to the preparation of briefs.

Professor Gilmore, 2 hours. I.
Prescribed for all Juniors.

8 **Senior Orations**—Two orations of not more than 1000 words, to be criticized in the presence of the author, revised by him, and rehearsed before delivery.

Professor Gilmore, I, II.
Prescribed for all Seniors.

9 **Advanced Work in Debate.** Those students who have shown especial proficiency in debate during the first term of the Junior year, will be permitted to elect advanced work in debate, for one hour a week, in place of the essay scheduled for the second term Junior; and also, if their work in debate is still satisfactory, in place of the oration scheduled for the second term Senior. Professor Gilmore, 1 hour. II.

COURSES FOR THE MASTER'S DEGREES

21 **History and Theory of Rhetoric.** Professor Gray.

22 **History and Theory of Literary Criticism.** Professor Gray.

ELOCUTION

Professor GILMORE

1 **The Theory of Elocution.** Lectures. 1 hour. I.
Prescribed for all Freshmen.

2 **Practical Training.** The class is divided into five sections, each of which meets the instructor one hour a week. 1 hour. II.
Prescribed for all Freshmen.

3 **Class Room Declamations,** with private rehearsals. 1 hour. III.
Prescribed for all Freshmen.

4 **Debates**—See Rhetoric 7 and 9.

5 **Orations**—See Rhetoric 8.

ENGLISH

Professor GILMORE and Assistant Professor GRAY

1 **English Literature.** The English people, their language and early literature. Lectures and text book.
Professor Gilmore, 2 hours. I.
Prescribed for all Sophomores.

2 **English Literature,** from the Renaissance to the present day. Lectures and text book.
Professor Gilmore, 2 hours. II.
Prescribed for all Sophomores.

3 **English Poetry from Spenser to Wordsworth.** Class-room readings and criticisms covering the period from Spenser to Wordsworth.
Professor Gilmore, 5 hours. III.

4 **Chaucer.** Selections from the Canterbury Tales and minor poems. Introductory and supplementary work in Middle English grammar. English 8 and 9 are advised in preparation, but are not essential.

Professor Gray, 3 hours. III.

5 **American Literature.** Lectures, critical readings, and class-room discussions. Professor Gilmore, 3 hours. II.

6 **Shakspere.** Lectures on the principal plays with required readings. Professor Gilmore, 2 hours. II.

7 **Old English (Anglo-Saxon) Prose and Poetry.** An elementary course, designed to introduce the student of English to the historical study of the language and to the beginnings of English poetry and prose.

Philosophical Freshmen may take this course.
Sophomores may substitute this course for English 1.
Prerequisite for English 8 and 9.
Professor Gray, 5 hours. I.

8 **Béowulf.** This pagan epic is read with attention to text, metre, literary, and archæological interests.

Sophomores may substitute English 8 for English 2.
Professor Gray, 3 hours. II.

9 **Cynewulf.** Two Christian epics of Cynewulf, the Andreas or the Christ and the Elene, are read with attention to text, metre, and literary interest.

Professor Gray, 3 hours. III.

10 **General and Comparative Literature and the Development of English Prose.** Lectures and critical readings covering the period from Mandeville to Macaulay.

Offered for 1905, omitted in 1906.
Professor Gilmore, 5 hours. I.

11 **Recent English and American Poetry.** Lectures on the nature of poetry; classicism, romanticism, and realism; Tennyson and Browning. Critical readings from Tennyson and Browning. Omitted in 1905, offered for 1906.
Professor Gilmore, 5 hours. I.

COURSES FOR THE MASTER'S DEGREES

21 **English Palæography.** Undergraduate course 8 is prerequisite. Professor Gray.

22 **Investigations in Bēowulf.** Professor Gray.

23 **Critical Readings in English Literature following the Line of Development.** Professor Gilmore.

24 **English Literary Criticism,** from Sidney and Puttenham to the present day. Professor Gilmore.

25 **The Entire Work of an Author.** The author for study in 1904–1905 is Wordsworth. Professor Gray.

Undergraduate elective courses are open to graduate students who have not already taken them.

GREEK

Professor KENDRICK

1 **Lysias or Herodotus.** The translation of five orations of Lysias, or portions of Herodotus, Books VI and VII, is supplemented by prose composition and discussion of important principles of Greek syntax. 5 hours. I.

Prescribed for classical Freshmen.

2 **Euripides.** Iphigenia among the Taurians. Translation and literary study are supplemented by weekly papers on the Greek theatre and the origin and development of the Greek drama and its influence upon subsequent dramatic literature. One hour a week is given to the study of the constitutional history of Greece down to the death of Pericles, B. C. 429. 5 hours. III.

Prescribed for classical Freshmen.

3 **Plato.** The Apology, Crito, and portions of the Phædo. These dialogues are studied for their literary interest and for their vivid picture of Socrates as a man and a moral teacher. Study of the constitutional history of Greece down to the death of Alexander the Great, B. C. 323.

5 hours. II.

Prescribed for classical Sophomores.

4 **Epic or Lyric Poets.** Homer's Odyssey, or selections from the earlier Greek lyric poets, including Solon, Theognis, Archilochus, Alcæus, Sappho, Anacreon, also odes of Pindar, Bacchylides, Sophocles, and several of the idylls of Theocritus. Lectures on the development of Greek poetry and the translation of significant writings of poets not read in any scheduled course.

Omitted in 1905 and 1906, offered for 1907.
5 hours. III.

5 **Demosthenes.** Oration on the Crown, or the Philippics. Special attention is paid to the oral rendering. Lectures on the development of Greek prose literature. Selections from other Attic orators and prose writers are also translated.

Offered for 1905, omitted in 1906 and 1907.
5 hours. III.

6 **Greek New Testament.** A philological study of one of the Gospels. Also translation and discussion, one hour a week, of passages from early Christian and non-Christian writings, that preserve interesting historical testimony or tradition concerning Christ and the Apostles. Lectures on the political and religious history of the Jews and of Palestine, from the reign of Herod the Great to the final overthrow of the nation under Hadrian.

Omitted in 1905 and 1907, offered for 1906.
5 hours. III.

7 **Plato.** Selections from the Republic, or Phædo. Lectures on the history of Greek philosophy from Thales to Plato, with special reference to some fundamental principles of modern philosophy and physics.

Omitted in 1905, offered for 1906.
5 hours. I.

8 **Aristotle.** Poetics, or Nicomachean Ethics, Books I–III, and X. Discussion of the literary and ethical teachings of Aristotle. Lectures on philosophy, devoted especially to

the study of Plato and Aristotle, and to the ethical systems of the Stoics, Epicureans, and Sceptics.

Offered for 1905, omitted in 1906.
5 hours. I.

9 **Hellenistic Greek.** First Maccabees, and selections from Josephus's Antiquities and Wars of the Jews, are studied with lectures and text-readings on the political and religious history of the Jews and of Palestine from the Babylonian captivity to the death of Herod the Great. Special study is given to the conquest of the East by Alexander the Great and the consequent diffusion of Hellenic civilization, the history of the Greek empires founded by Alexander's successors in the Hellenistic age, and the final conquest and organization of the Greek world under the Empire of Rome. The political, rather than the religious, position of the Jews among nations is emphasized, as a historical introduction to the study of the New Testament and the time of Christ.

Offered for 1905, omitted in 1906.
5 hours. II.

10 **Greek Archæology.** An outline history of the development of Greek architecture and sculpture. Special study of the topography and antiquities of Athens and Olympia based on Pausianias, Books I and V. A knowledge of Greek is useful, but not essential for this course.

Omitted in 1905, offered for 1906.
5 hours. II.

11 **Greek Reading.** Courses organized by special arrangement with the instructor, the classes meeting one hour a week to read authors not studied in any of the other courses. Such readings have included selections from the Memorabilia of Xenophon, Cebes's Tablet, Lucian, Thucydides, Aristotle's Constitution of Athens, Aristophanes.

For Freshmen II and III, credited as a 2 hour course.

For Sophomores, Juniors, or Seniors, I, II, and III, credited as a 3 hour course.

COURSES FOR THE MASTER'S DEGREES

21 **Readings from the great Dramatists.**

22 **History of the Athenian State.**

23 **Greek Archæology,** advanced course.

Undergraduate elective courses are open to graduate students who have not already taken them.

LATIN

Professor BURTON and Doctor HOEING

1 **Livy.** Portions of Books I and XXI. The reading of the text is accompanied by exercises in Latin composition illustrating the most important syntactical principles. Instruction is given regarding the historical character of the Roman legends and the origin of Roman political institutions in connection with the first book of Livy, and upon the period of conquest in connection with the twenty-first book.

Dr. Hoeing, 5 hours. II.

Prescribed for classical and philosophical Freshmen.

2 **Horace.** Selections from the Odes, Satires and Epistles. The literary study of the author is made prominent, with the aim of training the student to observe and reproduce in his own translation the poetical qualities of the original. Oral reading of the text, exhibiting both the thought and the metrical form, is constantly practised. A few odes are memorized and written translations are frequently required. Much attention is given to the poet's allusions to mythology, history, literature, and life. The history of the last century of the Republic is studied in connection with the course.

Professor Burton and Dr. Hoeing, 5 hours. I.

Prescribed for classical and philosophical Sophomores.

3 **Tacitus and Juvenal.** The Agricola and Germania and selected Satires. This course includes the study of the

political and social life and the literary character of the Early Roman Empire. Special instruction is given regarding the Roman system of government under the Empire. The course is terminated by a few lectures on the history of Latin literature, showing the relation of literature to public and private life, the general character of each literary period, and the place of each of the principal authors.

Professor Burton and Dr. Hoeing, 5 hours. III.
Prescribed for classical and philosophical Sophomores.

4 **Catullus, Tibullus, and Propertius.** The study of these authors is literary and comparative, including the indebtedness of the Roman to the Greek lyrists and elegists, the points of contrast between the Republican and Augustan poetry, and a comparison of the selections read with similar passages in other Latin poets. Offered in 1905, omitted in 1906.
Professor Burton, 5 hours. I.

5 **Latin Rhetoricians.** Portions of Quintilian, Books X and XII, with selections from Cicero's De Oratore, or Tacitus's Dialogus de Oratoribus. The course treats the art of oratory as taught and practised by the Romans. The selections read bring before the student both the ideals of Roman oratory and numerous practical maxims still useful to a young writer and speaker. At the end of the course one or more orations of Cicero are read, without translation, and analyzed with reference to their rhetorical structure.

Omitted in 1905, offered in 1906.
Professor Burton, 5 hours. I.

6 **Roman Philosophy.** Selections from Lucretius, or Cicero, or Seneca. Lectures are given upon the schools of philosophy best known to the Romans, in which the various systems are compared with each other and with modern views. The selections read exhibit particularly the physical theories of the Epicureans and the ethical teachings of the Stoics.

Professor Burton, 5 hours. II.

7 **Plautus and Terence.** The careful study of two plays, one from each author, together with the rapid reading of a third. Attention is paid to the formal, syntactical, and metrical peculiarities of ante-classical Latin, and lectures are given on the ancient drama in general, but particularly on the New Comedy of the Greeks and its Roman imitations, with frequent reference to modern analogies.

Dr. Hoeing, 5 hours. III.

8 **Teachers' Course.** A study of methods of teaching Latin, with practical exercises in instruction conducted by members of the class, under direction and criticism. The beginner's course is first taken up, and is followed by one or more of the authors read in preparation for college. A thorough review of Latin forms and syntax is required of the class.

Open to Seniors only.
Professor Burton, 3 hours. III.

9 **Advanced Composition.** A discussion of selected topics in Latin syntax, together with translation into Latin of connected passages of English prose. Adapted specially for those who expect to teach Latin.

Open to Seniors only.
Dr. Hoeing, 2 hours. III.

10 *a* **Latin Epigraphy.** Instruction is given mainly through lectures, accompanied by careful reading and interpretation of representative inscriptions. The members of the class present papers embodying the results of investigation along prescribed lines.

Open to Seniors only.
Dr. Hoeing, 3 hours. I.

10 *b* **Latin Palæography.** Lectures form the basis of the work, and the students are required to become familiar with the various types of Latin script by reading and copying facsimiles of classical manuscripts. Several lectures are given on the elements of textual criticism and emendation.

Open to Seniors only.
Dr. Hoeing, 1 hour. II.

11 **Historical Latin Grammar.** A series of lectures on the history of Latin forms, including pronunciation, phonetic laws, declension, and conjugation. Latin forms are studied comparatively as well as historically; hence a knowledge of Greek and also of Sanskrit Grammar (see Philology, course 1) is a useful though not indispensable preparation for this course.

Open to Seniors only.
Professor Burton, 5 hours. II.

12 **Roman Topography and Architecture.** Lectures are given on the topography of ancient Rome, and the public and domestic architecture of Rome and Pompëii, with the use of illustrative materials, as photographs, engravings, and stereopticon views. Papers are presented by the members of the class on assigned topics relating to the public and private life of the Romans. Professor Burton, 5 hours. III.

13 **Sight Reading.** Courses of reading in easy authors, with the special aim of gaining practice in oral reading at sight without formal translation. The texts most frequently read are *a* Cicero's Letters; *b* Pliny's Letters; *c* Cicero's Lælius and Cato Major; *d* Cicero's Brutus; *e* Aulus Gellius; *f* Ovid; *g* Phædrus and Martial; *h* Vergil's Eclogues and Georgics. Professor Burton or Dr. Hoeing, 1 hour.

For Freshmen II and III, credited as a 2 hour course.
For Sophomores, Juniors or Seniors, I and II, credited as a 2 hour course.

COURSES FOR THE MASTER'S DEGREES

21 **Readings in Latin Literature,** adapted to the aim and tastes of the student.

22 **Historical Latin Syntax.** Course 11 in Historical Grammar should precede.

23 **Latin Epigraphy and Palæography,** advanced course.

24 **Roman Constitutional History.**

25 **Roman Archæology.** Readings in Latin texts.

Undergraduate elective courses are open to graduate students who have not already taken them.

PHILOLOGY

Professor BURTON

1 **Sanskrit Grammar.** Whitney's Grammar with elementary instruction in the comparative grammar of the Indo-European languages. Open to Juniors only. 5 hours. II.

2 **Sanskrit Readings.** Selections from Lanman's Sanskrit Reader, with studies in comparative grammar. Open to Juniors only. 2 hours. III.

Course 2 may be continued through the Senior year, 1 hour a week, by arrangement with the instructor, to be credited as a three hour course.

3 **Comparative Philology.** A general introduction to the science of language. Instruction is given by lectures and discussions based on readings by the class in standard works. 2 hours. I.

All courses in philology may be taken by graduate students.

GERMAN

Assistant Professor SHEDD

1 **Elementary German a.** Becker's Elements of German. Instruction in pronunciation, grammatical forms, and general rules of syntax. Reading of selections from simple German prose literature. Practice in translation from English into German. Colloquial exercises. 5 hours. I. *Prescribed for classical Freshmen.*

2 **Elementary German b.** Select readings from modern prose, poetry, and the drama (e. g. Stern's Geschichten vom Rhein, Meissner's Aus deutschen Landen, Freytag's Die Journalisten, Benedix's Der Prozess or others of the books suggested for elementary German on page 37), with particular attention to the laws of word-formation and sentence structure.

5 hours. II.
Prescribed for classical Freshmen.

3 **Schiller.** Readings from the works of this author, together with a study of the history of German literature with special reference to Schiller's life and times.

5 hours. I.
Prescribed for philosophical and scientific Freshmen.

4 **Scientific German.** Readings in current scientific literature, with a more advanced study of German word-formation.

5 hours. II.
Prescribed for scientific Freshmen.

5 **Lessing.** Readings from the works of this author together with a study of his life and times. 5 hours. III.
Prescribed for philosophical Freshmen.

6 **Goethe, Selections.** Readings from the works of this author, exclusive of Faust, together with a study of his life and times.

Offered for 1905, omitted in 1906.
5 hours. II.

7 **Goethe, Faust.** Selections from the first and second parts of Faust, with lectures on the meaning of the drama and a study of the Faust literature.

Omitted in 1905, offered for 1906.
5 hours. II.

8 **Advanced Composition and Conversation.** A course intended specially for teachers. Thorough drill in syntax, sentence structure, and pronunciation. Exercises in conversation, dictation, and composition.

German 3 or 5 prerequisite.
5 hours. III.

9 **German Comedy.** Selections from modern writers of comedy. Credited as a three hour course when completed.
1 hour. I, II, III.

ROMANCE LANGUAGES

Assistant Professor MOORE

FRENCH

1 **Elementary French a.** Fraser & Squair's French Grammar. Easy readings in French prose. Instruction in pronunciation and grammatical forms. Colloquial exercises.
5 hours. II.
Prescribed for philosophical Freshmen and classical Sophomores.

2 **Elementary French b.** Translation and reading at sight of modern works of fiction and drama. A systematic course in composition, and further study of syntax and grammar.
5 hours, III.
Prescribed for philosophical Freshmen and classical Sophomores.

3 **Modern French Prose and Poetry.** Selections from modern historical prose. Chronological study of French lyric poetry. Lectures on important epochs of French literature. Short essays on prescribed subjects. 5 hours. III.
Prescribed for scientific Freshmen.

4 **Scientific French.** Designed for scientific students who wish to acquire some familiarity with French scientific terms.
2 hours. I.
Prescribed for scientific Sophomores.

5 **French Drama.** Representative works of the Classical, Romantic, and Modern schools of dramatic composition. Study of French versification. Lectures on the development of the drama.
5 hours. I.

6 **Advanced Composition.** Exercises in dictation. Opportunities for conversation. Careful drill in pronunciation.
Omitted in 1905.
French 3 prerequisite.
3 hours. II.

7 **Old French.** Reading of Old French texts. Explanation of principles of Old French morphology and philology. Lectures on various forms of literary production of the Middle Ages. Credited as a 3 hour course when completed.
1 hour. I, II, III.

SPANISH

1 **Elementary Spanish.** Grammar and colloquial exercises with readings in simple prose.
Omitted in 1905, offered for 1906.
5 hours. I.

2 **Select Readings.** Translation and reading at sight of modern works of history, fiction or drama. A systematic course in composition, and further study of syntax and grammar. Offered for 1905, III, and 1907, II.
5 hours. II.

3 **Classic Prose and Poetry.** Special attention to the life and writings of Cervantes, Calderon and Lope de Vega. Study of Spanish lyric poetry and principles of versification.
Omitted in 1906, offered for 1907.
3 hours. III.

ITALIAN

1 **Elementary Italian.** Grammar and colloquial exercises with readings in simple prose.
Offered for 1905, omitted in 1906.
5 hours. I.

2 **Select Readings.** Translation and reading at sight of works of history, fiction or drama. A systematic course in composition and further study of syntax and grammar.
Omitted in 1905, offered for 1906
5 hours. II.

3 **Classic Prose and Poetry.** Special attention to the life and writings of Dante and Petrarca. Study of the Commedia Divina, Vita Nuova, and poems of Petrarca. Possibly selections from Boccaccio will be read.
Omitted in 1905, offered for 1906.
3 hours. III.

MATHEMATICS

Professor ESTY, Mr. WATKEYS and Mr. LAMSON

1 **Advanced Algebra;** including the properties of quadratic equations, variations, inequalities, choice, chance, the theory of limits, the binomial thereom for all exponents, logarithms, logarithmic and exponential series, convergency, determinants, graphs, derivatives and a brief introduction to the theory of equations. Text book: Wells's Advanced Course in Algebra. Mr. Watkeys and Mr. Lamson, 4 hours. I.
Prescribed for all Freshmen.

2 **Plane and Spherical Trigonometry;** including the solution of the right spherical triangle. Text book: Wentworth's Plane and Spherical Trigonometry.
Mr. Watkeys and Mr. Lamson, 4 hours. II.
Prescribed for all Freshmen.

3 **Solid and Spherical Geometry.** Considerable attention is given to the numerical computation of areas and volumes. Text book: Wells's Essentials of Plane and Solid Geometry. Mr. Watkeys and Mr. Lamson, 4 hours. III.
Prescribed for all Freshmen.

4 **Analytic Geometry of the Conic Sections.** The properties of the conic sections are deduced by the method of Cartesian analysis, and numerous examples are solved to illustrate its further application. Text book: Wentworth's Analytical Geometry.
Professor Esty and Mr. Watkeys, 3 hours. I.
Prescribed for all Sophomores.

5 **Differential Calculus.** Text book: Granville's Differential and Integral Calculus. Professor Esty, 5 hours. II.
Prescribed for scientific Sophomores in Group II.

6 **Integral Calculus.** A continuation of course 5. It includes the use of hyperbolic functions, and an introduction to the theory of probability. Professor Esty, 5 hours. III.
Prescribed for scientific Sophomores in Group II.

7a **Advanced Analytic Geometry.** A continuation of

4, treating of poles and polars, higher plane curves, loci in space, and the general equation of the second degree in two and three variables.

7b **Differential Equations.** A short course designed especially for those who expect to take advanced courses in physics or mechanics.

a and *b* together. Professor Esty, 5 hours. I.
Prescribed for pretechnical Juniors.

8 **Analytical Mechanics.** The subject is introduced by a short course in vector analysis, and vector methods are freely employed throughout the work in mechanics. The course deals principally with kinematics, and includes the study of projectiles, the pendulum, harmonic and planetary motion, and Fourier's series. Text book: Ziwet's Theoretical Mechanics.

Professor Esty, 5 hours. II.
Prescribed for pretechnical Juniors.

9 **Analytical Mechanics continued,** dealing with the general principles of statics and kinetics, and embracing the following topics: centroids, moments of inertia, composition and resolution of forces, graphic methods, equilibrium, friction, virtual work, attraction and potential.

Professor Esty, 5 hours. III.
Prescribed for pretechnical Juniors.

10 **Differential Equations.** A continuation of *7b*, dealing with ordinary differential equations involving two and three variables, and applications to geometry, physics, and mechanics. The work also includes an introduction to Lie's theory of transformation groups.

Professor Esty, 5 hours. I.

11 **Advanced Integral Calculus.** This course includes a general discussion of definite integrals, with problems in rectification, quadrature, cubature, and the theory of probability; also a brief introduction to the theory of functions.

Professor Esty, 5 hours. II.

12 **Vector Analysis.** An introduction to the Calculus of Hamilton, with numerous applications to problems in geometry, trigonometry, physics, and mechanics.

Professor Esty, 5 hours. III.

13 **Descriptive Geometry.** This course is offered with special reference to students who expect to pursue technological studies after leaving college. The work consists of two parts: (1) the theory of orthographic projection, including the intersection and development of surfaces, also shades, shadows, and perspective; and (2) the construction of a set of plates illustrating these principles. Text book: Faunce's Descriptive Geometry.

Mr. Watkeys, 5 hours. III.

14 **Short Courses,** one hour a week, are also offered during the year to students of high scholarship who desire to pursue their mathematical studies farther than the regular courses permit. The subjects treated vary from year to year. Such a class, however, is regularly organized for special topics in advanced algebra and in spherical trigonometry.

Credited when the work is completed.
1 hour throughout the year. I, II, III.

COURSES FOR THE MASTER'S DEGREES

21 **Quaternions.**

22 **Analytic Theory of Surfaces and of Curves in Space.**

23 **Theory of Functions.**

24 **History of Mathematics.**

Undergraduate elective courses are open to graduate students who have not already taken them.

PHYSICS

Professor LAWRENCE and Mr. MINCHIN

A **General Course.** The course aims to cover the laws and phenomena of mechanics, sound, heat and light. Lectures and recitations.

Mathematics 1 and 2 prerequisite.
Professor Lawrence, 5 hours. I.
Prescribed for all Sophomores who did not offer Physics for entrance.

B **General Laboratory.** A group of elementary experiments chosen to illustrate the principles studied in Physics A.

Mr. Minchin, 2 hours[1], fee $3.50. II.
Prescribed for classical and philosophical Sophomores who do not elect Physics 1, 2, or 3.

1 **Mechanics and Heat.** Two lectures, one recitation, two laboratory periods a week.

Physics A or entrance physics and mathematics 1 and 2 prerequisite.
Mr. Minchin, 5 hours, fee $3.50. I.
Prescribed for all scientific Sophomores.

2 **Sound and Light.** Two lectures, one recitation, two laboratory periods a week.

Physics A or entrance physics and mathematics 1 and 2 prerequisite.
Mr. Minchin, 5 hours, fee $3.50. III.
Prescribed for all scientific Sophomores.

3 **Electricity.** Two lectures, one recitation, and two laboratory periods a week.

Physics A or entrance physics and mathematics 1 and 2 prerequisite.
Professor Lawrence, 5 hours, fee $3.50. II.
Prescribed for all scientific Sophomores.

4 **Dynamo and Motor.** This course includes the testing of various commercial instruments; the determination of dynamo and motor curves; tests of efficiency of dynamos and motors; determination of magnetic qualities of iron and steel. Some time may be devoted to accumulators, to transformers,

[1]In all laboratory courses at least two hours of laboratory work are required to secure one hour of credit.

and to arc and incandescent lamp photometry. Two lectures, one recitation, and two laboratory periods a week.

Physics 1, 2, and 3 prerequisite.
Professor Lawrence, 5 hours, fee $5.00. III.
Prescribed for all scientific Sophomores in Group B.

5 **Physical Measurements.** Laboratory experiments in mechanics, heat, sound, light, and electricity, any part of which may be taken by a student who has completed the corresponding subject in courses 1, 2, or 3. Groups of experiments are assigned to meet the individual needs. The experiments are chosen to illustrate the laws of physics, the more exact methods of physical experimentation, and the adjustment and use of instruments of precision. Given throughout the year, one or more terms may be elected.

Physics 1, 2, or 3 prerequisite.
Professor Lawrence and Mr. Minchin, 5 hours a term. I, II, III.
10 hours prescribed for scientific Juniors in Group B.

6 **Alternating Currents.** The subject is developed both analytically and graphically as in Bedell and Crehore's Alternating Currents, which is used as a text book.

Mathematics 5 and 6 prerequisite.
Professor Lawrence, 5 hours. I.
Prescribed for scientific Juniors in Group B.

7 **Electrical Measurements.** A supplementary course to physics 6. The study of alternating current machinery; current and potential measurements of alternating current circuits; the theory and construction of alternating current measuring instruments; measurements of self- and mutual-induction and of capacity; determination of insulation resistance and the hysteresis curves of iron and steel.

Physics 6 prerequisite.
Professor Lawrence, 5 hours, fee $5.00. II.
Prescribed for scientific Juniors in Group B.

NOTE: In all laboratory courses at least two hours of laboratory work are required to secure one hour of credit.

8 **Practical Photography.** Intended for students specializing in science.

Chemistry 1, 2, Physics 1, 2, 3, prerequisite.
Professor Lawrence, 3 hours, fee $5.00. III.

9 **Theory of Electricity.** Text book: J. J. Thomson's Elements of Electricity. Mathematics 5 and 6 prerequisite.
Professor Lawrence, 5 hours. II.

10 **Electro-chemistry.** Modern theories and recent work, including dissociation, conductivity, electromotive force, decomposition potentials, reaction velocities, etc.

Mr. Minchin, 5 hours, fee $7.50. I.

NOTE: In all laboratory courses at least two hours of laboratory work are required to secure one hour of credit.

COURSES FOR THE MASTER'S DEGREES

Advanced work in physical theory and practice will be arranged for graduate students in accordance with their attainments and special interests. Undergraduate elective courses are open to graduate students who have not already taken them.

MECHANICAL DRAWING AND SHOP WORK

Students in the College have opportunity to take courses at the Mechanics Institute in Rochester in mechanical drawing and shop work (both wood and iron). A circular of the Institute describing the courses offered may be had on application to the Registrar.

ASTRONOMY

Mr. MINCHIN

1 **General Astronomy.** The aim of this course is to give the student a general knowledge of descriptive and physical astronomy. Especial pains are taken to introduce

into the course from year to year the most recent additions to our knowledge of the heavens. The work is based upon a text book, and is illustrated by the frequent use of instruments in the lecture room. Besides this, many evenings are spent with the Trevor telescope. Physics 2 prerequisite. 5 hours. III.

CHEMISTRY

Professor LATTIMORE

1 **Theoretical and Descriptive.** Instruction is given by means of text books and experimental lectures. These cover a study of the more important elementary and compound substances, the history of chemical theory and discovery, the uses of instruments of precision, and the solution of chemical problems. A brief outline of organic chemistry is given with a study of some of the more important organic compounds. Written weekly reviews. 5 hours. III.

Prescribed for all scientific Freshmen, for philosophical Sophomores, and for classical students in Sophomore year.

NOTE: Classical and philosophical students who offer chemistry for entrance, and who do not wish to elect chemistry in college, may be excused from this requirement.

2 **Qualitative Analysis.** Laboratory work with lectures on laboratory methods. Qualitative determination of substances of unknown composition, leading to a classification of the elements into groups. Chemistry 1 prerequisite.

3 **Quantitative Analysis.** Individual instruction in the laboratory in the quantitative determination of a graded series of compounds, selected to furnish command of the methods of gravimetric, volumetric and electrolytic analysis. Instruction in the calibration of instruments of precision. Chemistry 2 prerequisite.

4 **Quantitative Analysis continued.** More advanced work in the quantitative determination of compounds and

mixtures. The choice of substances will be governed by the particular interests of the individual students, covering such subjects as assaying and various branches of industrial chemistry. Chemistry 3 prerequisite.

NOTE: Laboratory courses in chemistry are given throughout the year, with laboratory periods of two hours each, five days in the week, credited for 5 hours a term. Chemistry 2 may be elected in the first or second terms, but not in the third. Other laboratory courses may be begun in any term. Fee in all the laboratory courses in chemistry $10.00 a term.

5 **Organic Chemistry.** For students who are preparing for the medical profession or for technical or industrial pursuits. Laboratory study of organic compounds, selected in accordance with the interests of the individual students, including such subjects as medical chemistry, pharmaceutical chmistry, toxicology, sanitary chemistry—the analysis of air, water, foods, and the detection of adulterations. Chemistry 3 prerequisite.

Laboratory Courses in chemistry cannot be defined for specific terms for the reason that under the system of individual instruction different students progress very differently, and passage from one subject to the next may occupy less or more than a term. Advanced and special work may be so varied, according to the particular interests of individual students, that it is not practicable to organize it into courses by terms. A student may pursue chemistry in the laboratory, however, for three full years after the completion of Chemistry 1. The last terms for such a student will be devoted to the investigation of special problems offered by the line of work which he wishes later to pursue.

COURSES FOR THE MASTER'S DEGREES

Advanced work in chemical theory and practice will be arranged for graduate students in accordance with their

attainments and special interests. Undergraduate elective courses are open to graduate students who have not already taken them.

BIOLOGY

Professor DODGE and Doctor MERRELL

1 **Practical Biology: the Biology of the Cell.** A comparative study of the morphology and physiology of the animal cell as exhibited in the protozoa, e. g. amœba, paramecium, and vorticella, and in cells isolated from the bodies of higher animals, as salivary, blood, and ciliated cells; and a corresponding study of plant cells as exhibited in yeast, protococcus, spores of fungi, pollen grains, and spirogyra. Text books: Parker's Lessons in Elementary Biology; Dodge's Introduction to Elementary Practical Biology.

Dr. Merrell, 5 hours, fee $5.00. I.
Prescribed for scientific Freshmen in Groups A, C, D.

2 **Practical Biology: the Biology of the Animal.** A detailed comparative study of the structure and physiology of the following animals with a view to their relationships, development, evolution, adaptations, etc.: toilet and fresh-water sponges, grantia, hydra, campanularian hydroid, star-fish, earth-worm, lobster, locust, fresh-water mussel, and frog. Text books the same as in Biology 1.

Biology 1 prerequisite.
Professor Dodge, 5 hours, fee $5.00. II.
Prescribed for scientific Freshmen in Group C.

3 **Practical Biology : the Biology of the Plant.** The plants studied are selected so as to illustrate the structure, relationships, and adaptations of the algae, fungi, liverworts, ferns and flowering plants, especial attention being paid to the lower forms. Text books the same as in Biology 1.

Biology 1 prerequisite.
Dr. Merrell, 5 hours, fee $5.00. III.
Prescribed for scientific Sophomores in Group C.

4 **General Botany.** This course is intended especially for those who expect to teach in high schools and academies, and for those who wish to obtain in a single course an elementary knowledge of botany in all of its modern phases. No attempt to classify plants is made further than to define the great groups. The various plant organs are considered with reference to the adaptation of structure to function. Plants are studied as far as possible in the field in order to obtain a better understanding of their relation to their environment of water, soil, air, light and other plants. No previous work in botany is required. Text book: Leavitt's Outlines of Botany, with reference to Coulter, Kerner, Atkinson, and Barnes. Dr. Merrell, 3 hours, fee $2.00. III.

Prescribed for scientific Freshmen in Group C, and scientific Sophomores in Group D.

4*a* **Systematic Botany.** A course in the identification of the higher plants. Course 4 must either precede it, or be taken at the same time. Text book: Gray's Manual of Botany, with either Gray's or Leavitt's Lessons in Botany.

Dr. Merrell, 3 hours, fee $1.00. III.

Prescribed for scientific Sophomores in Group D.

5 **General Zoölogy.** A course in the natural history of animals; it includes a study of structure, physiology, habits, development, adaptations, distribution, etc., with lectures, and discussions upon current zoölogical theories. Typical forms are studied in the laboratory. Text book: Thomson's Outlines of Zoölogy. Prerequisite for Geology 4.

Professor Dodge, 5 hours, fee $5.00. II.

Prescribed for scientific Freshmen in Groups A, B, D; scientific Sophomores in Group C; classical and philosophical Juniors.

6 **Physiology.** This course, though to a certain extent comparative, consists chiefly of work in human anatomy and physiology. Experiments performed by the students

individually form a feature of the course. Text book: Martin's The Human Body, Advanced Course.

Professor Dodge, 5 hours, fee $2.00. I.
Prescribed for all Juniors.

7 **Bacteriology.** A study of methods of sterilization, of preparing nutritive media, of obtaining pure cultures, of identifying specific forms, and of making inoculations, etc. The course is preparatory to the subsequent study of medicine, advanced chemistry, or sanitary engineering. Text book: Novy's Laboratory Work in Bacteriology, with references to the standard German, English and French authorities.

Chemistry 1 and 2 and Biology 1 and 6 prerequisite.
Professor Dodge, 5 hours, fee $10.00. III.
Prescribed for scientific Juniors in Group C.

8 **Histology.** A study of the microscopic anatomy of the cat, and comparison with tissues from the human body. The student obtains and prepares all his own specimens. The work includes fixing, hardening, embedding, sectioning, staining, and mounting specimens of tissues and organs according to recent methods. Text book: Böhm-Davidoff-Hüber's Text book of Histology, with references to Piersol, Stöhr, Szymonowicz, and others.

Biology 1, 2, and 6 prerequisite.
Professor Dodge, 5 hours, fee $10.00. I.

9 **Embryology.** A course in the development of the pig and of the chick. Text books: Minot's Laboratory Text book of Embryology and Foster and Balfour's Elements of Embryology, with references to Marshall, Haddon, Hertwig, and others.

Biology 1, 2, 6, and 8 prerequisite.
Professor Dodge, 5 hours, fee $10.00. II.

10 **Plant Morphology.** A systematic study of the structure and life history of a series of plant types, together with lectures on the main lines of evolution among the ferns and seed plants, as a basis for their scientific classification. Especial emphasis will be laid upon such topics as alterna-

tion of generations, heterospory, and the seed. The laboratory work will be supplementary to that of Biology 1 and 3, and each student in the class must have a thorough knowledge of the types studied in these courses. Text book: Coulter's Plant Structures, with references to Strasburger, Goebel, and others. Dr. Merrell, 5 hours, fee $2.00. I.

11 **Plant Physiology.** A study of the fundamental vital processes of the plant, including experiments upon the maintenance of form, absorption from soil and air, conduction, transpiration, photosynthesis, respiration, nutrition, phenomena of growth, movement, etc. The course is intended especially for those who propose to teach, or are interested in scientific agriculture or horticulture. Text book: Green's Vegetable Physiology.

Physics 1, Chemistry 1, and Biology 3 and 10 prerequisites.
Dr. Merrell, 5 hours, fee $5.00. II.

12 **Fungi and Fungous Diseases of Plants.** Practical work in the collection and identification of fungi, especially those forms which are of economic importance; and an introduction to the study of plant diseases, as caused by vegetable parasites.

Omitted in 1905, offered for 1906.
Biology 3 prerequisite.
Dr. Merrell, 3 hours, fee $5.00. I.

13 **Physiological Anatomy of Plants.** Among the topics treated will be the following: the various tissues and organs of plants studied with reference to their function; the modifications in the structure of the various parts, in response to differences of natural environment; the devices used by plants in order to protect themselves against extremes of temperature, moisture, etc. Based on Haberlandt's Physiologische Pflanzenanatomie.

Omitted in 1905, offered for 1906.
Biology 10 and 11 prerequisite.
Dr. Merrell, 3 hours, fee $2.00. III.

COURSES FOR THE MASTER'S DEGREES

21 **Vertebrate Anatomy.**
22 **Mammalian Anatomy.**
23 **Cellular Biology.**
24 **The Biological Examination of Fresh Water.**
25 **Advanced Ecology.**
26 **Advanced Morphology.**

Undergraduate elective courses are open to graduate students who have not already taken them.

GEOLOGY

Professor FAIRCHILD

1 **Elementary Mineralogy and Petrology.** A study of the more common minerals, with special attention to the rock-making species in their ordinary associations as rock masses. In the field and laboratory, practice is given in the observation of the physical characters of minerals, and in distinguishing between mineral species. The elements of crystallography and microscopical petrography are introduced. The latter part of the course will cover the composition, structure, origin, distribution, and classification of the more common rocks. Dana's Manual of Mineralogy and Petrology, and Crosby's Tables for Determination of Common Minerals. 5 hours, fee $2.00. II.
Prescribed for philosophical Sophomores, and scientific Sophomores in Group D.

2 **Elementary Geology.** A general survey of the structure and history of the earth. The course begins with a study of the agencies which change the earth's surface, especially emphasizing the work of rivers and glaciers in western New York; then passes to a brief study of rock strata, mountain structure, and topographic forms; and

closes with a concise survey of the earth's history, and the development of life through the geologic ages. LeConte's Elements of Geology. 5 hours. III.

Prescribed for classical and philosophical Juniors, and scientific Juniors in Group C, who do not elect instead Geology 3 and 4.

3 **Physical Geology.** The geological forces and agencies, or the dynamics of the earth's crust; the interaction of internal heat and atmospheric agents; the effects of heat, frost, chemical forces, rain, rivers, glaciers, ocean, and organisms; the destruction, transportation, formation, and alteration of rocks; the origin of mountains, and continental movements; the phenomena of earthquakes, volcanoes, and geysers; and the structure of rocks and rock masses. The sedimentary rocks, glacial drift, and river and lake action, being well shown in the vicinity, will be the subjects of detailed field study. LeConte's Elements of Geology. Geology 1 recommended as a preparation. 5 hours. I.

Prescribed for scientific Juniors in Groups A, D, and for scientific Seniors in Group B.

4 **Historical (Stratigraphical) Geology and Paleontology.** A study of the terrestrial and climatic changes through geologic time, the growth of the continent of North America, and the evolution of life as recorded in the successive rock strata. Certain more important or more interesting fossils are especially studied, either as representative of life groups or as denotative of geological horizons; and the history of eminent groups of plants and animals is followed through the geologic record. The field study will of necessity be upon the strata and life of the Upper Silurian and Devonian Ages and the deposits of the Glacial Period. LeConte's Elements of Geology.

Geology 3 and Biology 5 prerequisite. Geology 1 recommended. 5 hours. III.

Prescribed for scientific Juniors in Group D.

5 **Meteorology.** An elementary study of the atmosphere, with special attention to cyclonic storms. During January, February, and March, the cyclonic months, the class does practical work in weather observation and in forecasting. Waldo's Meteorology.

Physics 1 prerequisite.
3 hours. II.

Prescribed for scientific Juniors in Groups C, D and scientific Seniors in Group B.

6 **Physiography.** The study of the surficial geology of western New York as illustrating physiographic development of land areas and topographic forms (Geomorphology). Davis's Physical Geography.

Geology 2 or 3 prerequisite.
2 hours. II.

Prescribed for scientific Juniors in Groups C, D and scientific Seniors in Group B.

These courses are specially desirable for those students who expect to teach in high schools.

7 **Economic Geology.** A theoretic study of the useful mineral products of the earth, followed by special study (with field-work) of the various economic products of western New York, such as: Medina sandstone, Niagara and Corniferous limestones, Portage and Chemung sandstones, the Waterlime and "Portland" cements, the clays and shales used for brick, terracotta, etc.; the salt mines and brine wells; the gypsum quarries; the Clinton iron ores; the gas fields.

Geology 3 and Chemistry 1, 2 prerequisite; Geology 1 recommended.
5 hours. I.

Special courses are offered in the following branches to students who are prepared. The design of these courses is to give opportunity for study supplementary to the preceding regular courses. The work will consist of individual investigation pursued under the direction of the instructor.

8 **Advanced Physical Geology.** 5 hours. II.

9 **Advanced Historical Geology.** 5 hours. III.

10 **Paleontological Geology.** 5 hours. III.

11 **Glacial Geology.** 5 hours. I.

COURSES FOR THE MASTER'S DEGREES

21 **Dynamical and Structural Geology of Stratified Rocks**—especially in Western New York.

22 **Geographical Geology of Western New York.**

23 **Canyons of the Genesee River.**

24 **Buried Valleys in Western New York.**

25 **Irondequoit Embayment.**

26 **Lake Iroquois History.**

27 **Niagara Strata and Fossils.**

HISTORY AND POLITICAL SCIENCE

Professor MOREY

Instruction in the political and social history of Greece and Rome is given in connection with courses 2, 3, and 9 in the department of Greek; and courses 1, 2, and 3 in the department of Latin.

1 **The Middle Ages.** A study of the causes of the decline of the Roman Empire; the Roman, German, and Christian contributions to mediæval society; the political and social character of the new Germanic kingdoms; the recovery of the Eastern Empire under Justinian; the rise and extension of the Mohammedan power; the political system of Charlemagne and its relation to the Church; the

rise of feudalism, the Holy Roman Empire of Germany, the ecclesiastical supremacy and the crusading spirit; together with the influence of these movements upon the civilization of Europe. Attention is given to the historical geography of Europe and the drawing of historical maps. Stillé's Studies in Mediæval History. 5 hours. I.

Prescribed for all Juniors.

2 **The Modern States System.** The causes leading to the transition from the mediæval to the modern state; the enfranchisement of the middle classes; the growth of representative government; the consolidation of modern national monarchies; the political consequences of the Reformation, the rise of the "balance of power" and the European colonial system; the growth and spread of modern constitutionalism, resulting from the three great political revolutions of England, America, and France, with a comparative study of the existing constitutions. Wilson's The State. 5 hours. II

Prescribed for all Juniors.

3 **Constitutional Law.** A study of the constitutional law of the United States as a federal system of government, comprising the organic law of the central government and that of the several states; the distribution of political powers between the federal and state governments; and the interpretation of constitutional powers and rights, as illustrated by cases selected from the reports of the United States Supreme Court. Cooley's Principles of Constitutional Law.

5 hours. I.

4 **History and Principles of the Roman Law.** A discussion of the general principles of positive law; the origin of legal rights and procedure; the historical development of the Roman civil law from the time of the XII Tables; an exposition of its main principles as embodied in the Institutes of Gaius and Justinian; and the influence of the Roman law

upon the modern civil law and the common law of England. Morey's Outlines of Roman Law. 5 hours. II.

5 **International Law and Diplomacy.** The history of the international relations of modern European states; the growth of the science of international law since the time of Grotius; together with a discussion of the principal rights and duties which are at present recognized as binding between states in time of peace and of war. Special attention is paid to the history of American diplomacy. Davis's Outlines of International Law. 5 hours. III.

The Junior Historical Society. This organization of the members of the Junior class has had a continued existence for several years. Its object is to furnish to students specially interested in historical investigation an opportunity for coöperation and original work. Topics relating to the constitutional history of the American colonies have usually been selected for this work not only on account of the intrinsic interest which attaches to these topics, but also on account of the relatively large facilities afforded by the library for the study of the colonial institutions of America. The society is organized at the beginning of the second term of the Junior year.

Credit for 1 hour will be given to students who satisfactorily perform this work.

COURSES FOR THE MASTER'S DEGREES

21 **Contemporary European History.**

22 **Political Science.**

23 **Comparative Constitutional Law.**

24 **The English Constitution.**

25 **The United States Constitution.**

26 **The Swiss Constitution.**

27 **General Jurisprudence.**

28 **The Civil Law.**

29 **The Common Law.**

30 **International Law.**

Undergraduate elective courses are open to graduate students who have not already taken them.

POLITICAL ECONOMY

Professor MOREY

1 **General Economics.** In this course attention is paid to the history of economic theories as represented by the policy of the mercantilists, by the physiocratic school, by Adam Smith and the English individualist school, by Marx and the German socialist school, by Roscher and the modern historical school. Care is taken to distinguish between the general scientific laws which underlie the phenomena of wealth and which rest in the constitution of nature and man, and the practical application of these laws which under special conditions are brought within the economic functions of the state. Text book: Ely, Bullock, or Gide.

2 **Special Economic Topics.** In this course special topics in the various branches of economic science are assigned to the different members of the class, and are made the subject of original investigation, so far as this is possible. The results of these investigations are presented to the class in the form of oral dissertations, accompanied by analytical synopses and bibliographical lists, the analyses and dissertations being made the subject of class room discussion and criticism.

1 and 2 given conjointly, 5 hours. III.
Prescribed for all Juniors.

COURSES FOR THE MASTER'S DEGREES

21 **Economic Theory and Method.**
22 **English Economic History.**
23 **American Economic History.**
24 **Recent Economic History.**
25 **Capital and Labor.**
26 **Problems of Distribution.**
27 **Socialism.**
28 **Finance.**
29 **Bimetallism.**
30 **Economic Functions of the State.**

Undergraduate elective courses are open to graduate students who have not already taken them.

PHILOSOPHY

Professor FORBES

1 **Elementary Psychology.** The course includes: (1) A general treatment of the phenomena of mind by a method which is chiefly introspective and analytic, and involves constant reference to the psychological origin of philosophical and pedagogical problems; (2) A special study of the postulates and methods of physiological, experimental, genetic and abnormal psychology with a view to determining the place and significance of these modes of investigation in the science as a whole.

Given in 1905 in the second term for Juniors.
5 hours. I.
Prescribed for all Seniors.

2 **Logic.** The aim is to give the elements of a philosophy of method with a view to grounding the student in the fundamental laws of the investigation and organization of knowledge in all departments. Formal logic is reduced to a subordinate position among the forms of method, and equal

importance is attached to mastery by the student of the methodology of physical, social, and philosophical science.

Given in 1905 in the third term for Juniors.
5 hours. II.
Prescribed for all Seniors.

3 **Elementary Ethics,** including discussion of the moral agent, moral law, and moral action, classification of rights and duties, exercises in casuistry, and study of contemporary problems. The method is first analytical, then historical and critical, and finally constructive.

Given in 1905 in the first term for Seniors.
5 hours. III.
Prescribed for all Seniors.

4 **Introduction to Philosophy (Metaphysics).** Elementary studies in the problems and methods of metaphysics, emphasizing especially the philosophic grounds of theistic belief, and serving as a preparation for course 6. The method employed is designed to develop the powers of concentrated and independent thinking, and presents the material in the form of a logically connected series of problems, eliciting tentative solutions, and then eliminating error by criticism.

5 hours. I.

5 **History of Ancient Philosophy,** including the interpretation of selections from the works of Plato and Aristotle, with lectures by the instructor, and theses prepared by the students, so arranged as to give a connected outline of Greek speculative thought. This course forms a part of courses 7 and 8 in the department of Greek.

See page 86.

6 **History of Modern Philosophy.** The development of modern speculative thought is traced from the Renaissance to the present time, with analysis and criticism of leading systems. The text book is supplemented by lectures, theses, and discussions.

Philosophy 4 prerequisite.
5 hours. II.

7 **Institutes of Education,** including a comprehensive survey of the data of educational theory and method, the deduction or induction of fundamental principles, and their application to the practical problems of the teacher.

5 hours. II.
Prescribed for candidates for teachers' certificates.
(See page 75.)

8 **History of Education,** tracing the development of the most important educational institutions, theories, and methods, with interpretation of their significance for modern pedagogy. The work is supplemented by special study of selected periods and theories, with written theses.

5 hours. III.
Prescribed for candidates for teachers' certificates.
(See page 75.)

9 **Readings in Philosophy,** designed to introduce the student to the philosophical vocabulary and literature in German or French. Meetings two hours once a week.
1 hour credited as two hours on the completion of the work. II, III.

COURSES FOR THE MASTER'S DEGREES

21 **Advanced Psychology.**
22 **General Anthropology.**
23 **History of Ethics.**
24 **History of Philosophy.**
25 **The Critical Philosophy of Kant.**
26 **Metaphysic.**
27 **Dialectic.**
28 **Logic.**
29 **Æsthetic.**
30 **Philosophy of Education.**
31 **History of Education.**

Undergraduate elective courses are open to graduate students who have not already taken them.

BIBLICAL LITERATURE

President RHEES

1 **The Life and Teachings of Jesus.** A general survey adapted for the student who is not contemplating special work in theology, yet so treated as to be introductory to professional study. Offered for 1905, omitted in 1906. 2 hours. II,[1] III.[1]

2 **The Life and Writings of Paul.** An introduction to his personality and leading ideas; adapted for the general student. Omitted in 1905, offered for 1906. 2 hours. II,[1] III.[1]

[1]Credit is given for 4 hours on the completion of the work of the third term.

PHYSICAL EDUCATION

Doctor POLLARD

The work in this department is designed to conserve the health and quicken the mental powers of the students. The hygenic ends sought are: (1) The aid of physical function. (2) The development of form. (3) The correction of undeveloped or deformed parts. (4) The supply of recreation. The educative ends sought are: (1) The knowledge of gymnastic theory. (2) The development of muscular strength. (3) The perfecting of nervous control. (4) The increase of mental perception and acumen. (5) The cultivation of mental and moral self-control.

The educative work is graded and credit is given on the basis of general improvement.

Physical training is prescribed for all Freshmen and Sophomores, and for special students during the first two years of attendance in the College. Each student is subject to a thorough physical examination before entering upon the

work of the gymnasium, and may be required to take such special individual exercises as the Physical Director deems necessary. The work with the Freshman class is introduced by a course of lectures on the physiology of exercise.

THE HISTORY OF ART

Doctor DENIO

1 **Italian Art.** Architecture, Sculpture and Painting in Italy from the mediæval period to the present time; fully illustrated by photographs and other prints. 3 hours. II.

2 **Public Lectures.** The History of English Art, profusely illustrated by stereopticon; on Thursday afternoons beginning February 9, 1905. Open to the general public.

Honors and Prizes

Honor Standing. Students who maintain an average standing of at least eighty-five per cent during the preceding year (in the case of Freshmen during the first term) will be given honor standing, and so long as they maintain that standing, such students will be eligible to elect the maximum number of hours (see page 55), to compete for prizes (see below), and to register for departmental honors.

Departmental Honors. A student who has maintained honor standing in the work of the Junior year may register for honors in any department in which such student's work has been rated at not less than ninety per cent. Departmental honors will be awarded at the annual Commencement if such student has completed not less than fifteen hours in the department in addition to all work in that department prescribed for that student's degree.

In departments which do not offer the number of electives requisite for departmental honors the following system of grouping will be permitted:

Rhetoric with English.
Biblical Literature with English.
Astronomy with Physics.
Political Economy with History.
Philology with Greek or Latin.

Prizes. Students who wish to compete for the following prizes must have secured honor standing (see above) unless an exception is specially stated in the description of the prize.

Work done in competition for undergraduate prizes will be estimated in terms of hours of credit. Such work to the

extent of five hours may be counted towards departmental honors (see above). Any such work in excess of five hours may be credited towards a degree. The number of hours of credit attainable with each prize is indicated in the description of the prize.

GRADUATE SCHOLARSHIPS

The Sherman Scholarship. The sum of five thousand dollars was given by the late Isaac Sherman, of New York, as a permanent endowment for a graduate scholarship in the department of Political Economy. This scholarship is granted to that man in the Senior class, who, being properly qualified, passes the best examination upon some selected work on a subject in economics, in the French or the German language. The successful competitor will receive one hundred dollars at graduation, and an additional sum of one hundred and fifty dollars if, within two years after graduation, he shall present a satisfactory thesis upon some specially assigned topic in political economy.

The subject for the present year (1904–1905) is Inama-Sternegg, Deutche Wirtschaftsgeschichte in den lätzten Jahrhunderter des Mittelalter.

The competitors for The Sherman Scholarship will be assigned work equivalent to a five hour course for one term.

The Townsend Scholarship. The sum of five thousand dollars has been received from Mr. Charles John Townsend, A. M., of Lockport, N. Y., a member of the class of 1879, as an endowment for a graduate scholarship in the department of Political History and Constitutional Law, given by him in memory of his father, the late John Pomeroy Townsend, LL. D., who founded the scholarship in 1876, and supported it by annual payments for many years. This scholarship is

granted to that man in the Senior class, who, being properly qualified, passes the best examination upon some selected work on a subject in politics or constitutional law, in the German or the French language. The successful competitor will receive one hundred dollars at graduation, and an additional sum of one hundred and fifty dollars if, within two years after graduation, he shall present a satisfactory thesis upon some specially assigned topic in politics or constitutional law.

The subject for the present year (1904–1905) is Donnat, La Politique Experimentale.

In the case of both these scholarships, the merits of the undergraduate competitive examinations and of the graduate theses are determined by an examining committee of experts not connected with the Faculty.

Competitors for The Townsend Scholarship will be assigned work equivalent to a five hour course for one term.

TWO SCHOLARSHIPS IN BIOLOGY

Two scholarships, named respectively **The Edward Mott Moore Scholarship** and **The Chester Dewey Scholarship,** have been established in biology. They are of the annual value of fifty dollars and yield free tuition at the summer session (six weeks) of the Marine Biological Laboratory at Wood's Hole, Mass. They will be awarded for proficiency in biological work to students who will avail themselves of the privilege granted. Applicants for these scholarships must have completed courses 1 to 6 inclusive, or the equivalent, in the department of Biology.

UNDERGRADUATE PRIZES

The Davis Prizes. The sum of one thousand dollars was given by the late Honorable Isaac Davis, LL. D., of Wor-

cester, Mass., the annual income of which is expended in purchasing two gold medals of unequal value, to be given to the two men in the graduating class, whose orations on Commencement day shall exhibit respectively the first and second grades of excellence in thought, composition, and delivery combined.

The Hull Prize. The Reverend Robert B. Hull, D. D., of Brooklyn, of the class of 1871, has given the sum of one thousand dollars to endow a prize which will be given to the man in each Senior class who shall present the best essay upon a subject selected by the Faculty. The essay submitted must not exceed 3000 words in length.

The subject for the present year is Tennyson's Conception of the Perfectibility of Man.

Work in competition for The Hull Prize is estimated equivalent to a one hour course for one term.

The Dewey Prizes. From the income of a bequest of five hundred dollars by the Reverend E. R. Beadle, D. D., of Philadelphia, a pupil and friend of the late Chester Dewey, Professor of the Natural Sciences in this College from 1850 to 1868, two prizes are given for the best exercises in declamation by men selected from the Sophomore class on the basis of oratorical ability.

The Stoddard Prizes. The University has received from the late Professor John F. Stoddard the sum of fifteen hundred dollars, to endow two prizes of equal value, one to be awarded to the man in each graduating class who shall pass the best examination on some text book work in mathematics, and the other to the man in the same class who shall present the best thesis on some topic assigned for special investigation in physics.

In Mathematics. Seniors who compete for this prize must have completed nine courses in mathematics. The subject for the present year is The Theory of Curve Tracing.

Competitors for The Stoddard Prize in mathematics will be assigned work equivalent to a five hour course for one term.

In Physics. Seniors who compete for this prize must have completed Physics 1, 2, 3, 4 and one term of Physics 5. Registration must be made at the beginning of the autumn term of the Senior year, and the experimental work must be finished not later than the close of the winter term. Fee $7.00.

The subject for the present year is A Test of Photographic Lenses for Optic Faults.

Competitors for the Stoddard Prize in physics will be assigned work equivalent to a five hour course for two terms.

The Elizabeth M. Anderson Prize. By the gift of William Wallace Gilbert, of the class of 1861, and Charles M. Williams, of the class of 1871, the income of eight hundred dollars has been appropriated as an annual prize, to be awarded under conditions prescribed by the Faculty, to the member of the Senior class who shall show the highest proficiency in some subject connected with art.

For the present year, the requirement for competition is a thesis of not less than 2000 words on The Classic Element in Christian Art.

Work in competition for The Elizabeth M. Anderson Prize is estimated equivalent to a one hour course for one term.

The Colonial Dames Prize. The Society of Colonial Dames of the State of New York established in the year 1899 an annual prize of fifty dollars, with a silver medal, to be awarded to the member of the Senior or Junior class who presents the best essay upon an assigned subject connected with American colonial history.

The subject prescribed for the present year is: William Penn and the Persecution of the Quakers in America.

Competitors for the Colonial Dames Prize will be assigned work equivalent to a two hour course for one term.

The Alling Prizes. Mr. Joseph T. Alling, of the class of 1876, has offered two prizes, one of thirty dollars and one of twenty dollars, for excellence in public debate. The contestants are to be drawn from the men in the Senior and Junior classes on the basis of superior work in the class room debates.

The N. B. Ellison Prize. Mr. F. T. Ellison of the class of 1873 and Mrs. C. H. Ocumpaugh, of Rochester, have given the sum of twelve hundred dollars to endow a prize in memory of their father, the late N. B. Ellison of Rochester. The donors have expressed the wish that the prize be awarded to the man in the Senior class who submits the best essay on a subject in political science. The subject for the present year is: The Political Philosophy of Hobbes:—Its Character and Influence.

Competition for The N. B. Ellison Prize will be assigned work equivalent to a one hour course for one term.

The Susan B. Anthony Prize. The New York State Women's Suffrage Association has offered for the present year (1904–1905) a prize of twenty-five dollars to that member of the Junior or Senior class who submits the best essay on the subject, Woman and the Constitution of the United States.

Competitors for this prize will be assigned work equivalent to a one hour course for one term.

All writings submitted in competition for prizes, except examination papers, are to be in printed or typewritten form on paper of thesis size (8 x 10½ inches), bound according to the Librarian's specifications, and they will be deposited in the college library. Each thesis or essay must have a table of contents and contain a list of authorities consulted.

Saturday Classes

Teachers in Rochester and the neighboring towns may have opportunity to do college work on Saturday mornings, and receive college credit for the work accomplished. Admission to these classes will be subject to the regular entrance requirements (see pages 35–47). The fee for each course is $6.00 a term. Persons who are interested may learn from the Registrar what courses are to be offered for a given term.

The following are formally registered for these classes at present:

Nicholas Lee, Churchville.
W. W. Rayfield.
Agnes G. Brady, Churchville.
Mary A. S. Clackner, Rochester.
May L. Furman.
Johanna M. Hopeman, Rochester.
Teresa B. Kane, Rochester.
M. F. Logan, Rochester.
M. F. McMahon.
Alma M. McMath, Rochester.
Hattie C. Mink, Rochester.
Lillian S. Murray, Rochester.
Mary E. Ready.
Lucy G. Robertson, Churchville.
Jeanne Wilkinson, Rochester.
Marion E. Wright, Rochester.
E. M. Yawger, Rochester.

General Regulations

Terms and Vacations. The college year is divided into three terms, dating from Commencement day, which falls on the third Wednesday in June of each year. The first term begins in September on Thursday, thirteen weeks after the Commencement day. The first term closes on the 20th of December, unless that date falls on Saturday or Sunday, in which case the term closes on the Monday before Christmas. The second term begins on January 3rd, unless that date falls on Friday, Saturday or Sunday, in which case the term will begin on the first Monday of January; the term ends on the third Wednesday of March. The third term begins on Thursday of the following week, and extends to the third Wednesday of June. The dates of the beginning and close of the several terms and recesses will be found in the calendar (pages 152, 153).

Lectures and Recitations. A printed schedule of the exercises for each term is published four weeks before the close of the preceding term. Each student is expected to have at least three daily exercises during the five days in the week. No student is permitted to take, exclusive of gymnasium work, less than ten hours a week, nor more than twenty-two hours a week in any one term.

Permission to take advance work amounting to twenty, twenty-one, or twenty-two hours a week, exclusive of gymnasium appointments, in any term will be given only to students who have attained honor standing (see page 120) for the preceding term, whose attendance in the chapel and the gymnasium is satisfactory, and whose outside engagements warrant it.

The number of hours a week mentioned in this section does not include the appointments for physical culture prescribed for Freshmen and Sophomores.

Selection of Studies. On or before a specified date before the end of each term (see calendar, pages 152, 153) each student is required to consult with his class officer concerning the studies to be taken in the next term. The class officer will furnish a registration card on which the student will indicate all the proposed studies, both prescribed and elective. This card must be submitted to each instructor with whom the student wishes to elect work, and the instructor's endorsement must be entered on the card. The student must then return the card to the class officer for his approval. The schedule of studies thus approved will be required of the student for the term indicated.

Attendance. Students who are absent from the first appointment in any term in the courses for which they are enrolled, will be admitted to such courses only on presenting to the instructor a certificate from the Registrar stating that a special enrollment fee of one dollar has been paid. To provide for absences during the term, which seem to the student unavoidable, an allowance will be made in each course equal to the number of hours a week assigned to that course. If a student's absences in any course are greater than this allowance, for each absence in excess his term standing will be reduced by one-half of one per cent. in four and five hour courses, one per cent. in two and three hour courses, and two per cent. in one hour courses. Moreover, to recognize the benefit gained by regular attendance, if a student's absences in any course are less than the number allowed, for each avoidance of an allowed absence his standing for that course will be increased by the percentages named above, provided that the resultant standing may in no case exceed 100 per cent.

Examinations, Conditions, and Failure. The value of a student's work in any course is determined by the instructor in that course by means of both recitations and a final examination. Students who are "conditioned" in the work of any course are entitled to one delinquent examination for the purpose of removing the condition. This examination must be taken at the time prescribed by the instructor, and not later than the first Saturday of the second term following that in which the condition was incurred. Students who "fail" in the work of any course are required to take the subject again with the next lower class, and they are ranked as members of the next lower class until they have passed in the delinquent study. A conditioned student who fails to remove his condition in the appointed delinquent examination will be classed as having "failed" in the course, and will be required to take the subject with the next class.

Religious Exercises

It is the aim of the Faculty, in connection with the discipline of the intellect, to inculcate a reverent spirit, a pure morality, and those truths and duties concerning which all Christians are agreed; and they are expected during their residence at the college to be regular in attendance in the church of their choice.

A short religious service is conducted at the chapel, at 10:15 a. m. daily excepting Saturday and Sunday. The students are expected to attend unless specially excused by the President.

The college Young Men's Christian Association conducts several Bible classes on Sunday afternoons. These classes are now pursuing (1) studies in the life of Christ, (2) studies in the Acts and Epistles, (3) studies in missionary biography. The Association also maintains a student prayer meeting.

Prizes Awarded in 1904

CLASS OF 1903

The Sherman Scholarship, graduate award—for a thesis upon "The Cement Industry Considered in its Economic Significance" to Burlew Hill. Committee of award: Emil Kuichling, C. E.

CLASS OF 1904.

The Sherman Scholarship, undergraduate award—for an examination upon Schmoller's "Social-und Gewerbepolitik der Gegenwart" to George Crosier Whitney. Committee of award: V. J. Ruppert, J. U. D., and the Reverend Max Landsberg, PH. D.

The Townsend Scholarship, undergraduate award—for an examination upon Pradier-Fodéré's "Principes généraux de Droit, de Politique, et de Législation" to James Holly Hanford. Committee of award: V. J. Ruppert, J. U. D., and the Reverend Max Landsberg, PH. D.

The N. B. Ellison Prize—for an essay upon "The Political and Scientific Significance of 'The Prince of Machiavelli'" to George Hayden Rounds. Committee of award: Mr. Charles M. Williams.

The Alling Prizes—for excellence in public debate—to the representatives of the Senior class, for the most effective maintenance of their position; to William Morse Hastings, for individual excellence. Committee of award: Roscoe C. E. Brown, 1889, Judge William C. Ramsdale, 1879, Mors O. Slocum, 1889, Benjamin Folsom, Esquire, 1871, the Rev. Thomas J. Villers, D. D., 1887.

The Davis Prizes—for excellence in oratory at Commencement, the award covering thought, expression, and delivery combined—first prize, to George Halcott Chadwick; second prize, to James Holly Hanford. Committee of award: President John F. Forbes, PH. D., 1878, George D. Hale, A. M., 1870, Aldice G. Warren, A. B., 1883.

The Stoddard Prize in Mathematics—for an examination on "Vector Methods in Mechanics" to Harold Hastings Hallock. Committee of award: Professor T. C. Esty.

The Elizabeth M. Anderson Prize—for an essay on "Gothic Architecture in Italy" to Alice Harriet Colby. Committee of award: Mr. Claude Fayette Bragdon.

The Susan B. Anthony Prize—for an essay upon "Woman's Suffrage" to William Morse Hastings and Helen Margaret Ellwanger. Committee of award: The Reverend William C. Gannett, and Mrs. H. S. Greenleaf.

The Colonial Dames Prize—for an essay upon "The Beginnings of Education in the American Colonies" to Alice Harriet Colby. Committee of award: The Reverend Nelson Millard, D. D.

CLASS OF 1905

The Edward Mott Moore Scholarship in Biology—for proficiency in work in the department of Biology—to Alvalyn Eunice Woodward.

CLASS OF 1906

The Dewey Prizes—for excellence in declamation—first prize, to H. Willard Bosworth; second prize, to Jacque Louis Meyers. Committee of award: The Reverend William Potts Hellings, D. D., 1864, Mr. George Howard Thornton, 1872, Mr. Willis G. Carmer.

HONORABLE MENTION AWARDED IN 1904

Class of 1904

To James Holly Hanford—in *Greek,* for readings from the Greek lyric poets.

To Helen Margaret Ellwanger—in *Greek,* for readings from the Greek lyric poets; in *Latin,* for a course of readings in Pliny's Letters.

Class of 1905

To Walter Riley Beckley—in *English,* for an examination on Johnson's "Elements of Literary Criticism."

To Theodore Augustus Zornow—in *Italian,* for an examination on Sergi's "Teoria Fisiologica della Percezione."

To Helen Rogers—in *Latin,* for a course of readings in Pliny's Letters.

To Alvalyn Eunice Woodward—in *Latin,* for a course of readings in Pliny's Letters, the Bucolics and Georgics of Vergil, and Sallust's Catiline.

Class of 1906

To Frederick Betz—in *Mathematics,* for a course in special topics in Advanced Algebra.

To Jacque Louis Meyers—in *Latin,* for a course of reading in Ovid.

To Lillian Louise Crafts—in *Latin,* for a course of reading in Ovid.

Class of 1907

To Howard Phillips Barss—in *Greek,* for readings in Xenophon's Memorabilia and Cebes's Tablet.

To Clara Bessie Crittenden—in *Mathematics,* for a course in special topics in Advanced Algebra.

To Ethel Rogers—in *Greek,* for a course of reading in Xenophon's Memorabilia and Cebes's Tablet.

Organizations of the Alumni

ASSOCIATED ALUMNI OF THE UNIVERSITY OF ROCHESTER

President, The Hon. Walter S. Hubbell, 1871.
Vice-President, Seth Sprague Terry, 1883.
Secretary, Eugene C. Denton, 1887.
Treasurer, Francis S. Macomber, 1889.

Board of Managers

W. S. Hubbell.
Eugene C. Denton. } *Ex officio.*
Francis Macomber.

Herbert J. Menzie, 1886.	Term expires 1905.
Harold C. Kimball, 1882.	Term expires 1905.
Hiram R. Wood, 1891.	Term expires 1906.
William T. Plumb, 1891.	Term expires 1906.
George M. Forbes, 1878.	Term expires 1907.
Adelbert Cronise, 1877.	Term expires 1907.

Executive Committee

Nelson E. Spencer, 1893. Joseph R. Webster, 1894.
Curtis FitzSimons, 1893.

LOCAL ASSOCIATION OF NEW YORK CITY

President, Hon. Willis Seaver Paine, LL. D., 1868.
First Vice-President, Rev. Henry L. Morehouse, D. D., 1858.
Second Vice-President, Capt. John R. Howard, A. M., 1857.
Third Vice-President, Hon. Waldo G. Morse, [1881.]

Secretary, James Albert Hamilton, A. M., LL. B., 1898.
357 West 29th St., New York City.
Treasurer, Nelson Curtice Holt, M. D., 1875,
195 Lenox Avenue, New York City.
Chorister, Fred Prosser Salisbury, 1902.

Executive Committee
Hon. William R. Willcox, LL. B., A. M., [1889].
Hon. Theron G. Strong, 1868.
Professor Albert C. Hale, PH. D., 1869.
Professor Roger W. Swetland, 1894.
Professor Homer C. Bristol, A. M., 1874.
F. Leon Shelp, 1900.

SCHOOLMASTER'S CLUB OF THE UNIVERSITY OF ROCHESTER

President, William James Milne, PH. D., 1868, Albany.
Secretary, Principal Herbert Seeley Weet, A. M., 1900.
Rochester.

The clubs meets annually in Syracuse in connection with the gathering of the Associated Academic Principals.

Degrees Conferred in 1904

Doctor of Laws, Honorary

Henry Strong, A. M., M. D., LL. B., 1854.

Doctor of Science, Honorary

Merritt Gally, A. M., 1863.

Inventor of the counterpoise pneumatic system of the Aeolian, Pianola and like instruments; and the relay telephone.

Master of Arts, Honorary

William Russell Willcox, LL. B. [1889],

President of the Park Commission, New York City, from January, 1901, to December, 1903.

Master of Arts

Roscoe Conkling Ensign Brown, 1889.

In political Science. Thesis subject: The Tendency towards Centralization.

Eleanor Larrabee Lattimore, A. B., [Bryn Mawr, 1900].

In Pedagogy, Chemistry and Biology. Thesis subject: A Graded Course of Nature Study for the Elementary Schools.

Bachelor of Arts, in Course

Solomon Jacob Applebaum
Orrin Barker
Henry Betz
Charles Clarence Bidwell
Henry Thomas Clark
Arthur Garfield Dutcher
George Frederick Hixson
Joseph Patrick Hogan
Wallace Bruce Large
Fletcher Whitman Peck
Mortimer Silas Peet
George Hayden Rounds

Edmund Maurice Evans
Howard Heermans Field
Leighton Horace Forbes
James Holly Hanford
Walter Raleigh Thomas
George Martin Weimar
George Crosier Whitney
George Harold Wolcott

Vera Estelle Chadsey
Alice Harriet Colby
Lulu Helen Covey
Helen Margaret Ellwanger
Mamie Griesheimer
Emma Elizabeth Lotz

Adelberta Weber

Grant Hugh Browne, as of the class of 1885

BACHELOR OF PHILOSOPHY, IN COURSE

George Halcott Chadwick
Harold Hastings Hallock
William Morse Hastings
Edward George Zimmer

Mabel Lendon Boddy
Byrintha Louise Chatterson
Gertrude Minnie Jones
Laura Mae Cole
Lilian Ione Salisbury
Lois Ethel Stevenson

Ellen Gilman Vadas

BACHELOR OF SCIENCE, IN COURSE

Fred Elmer Gladwin
Kenneth Samuel Howard
Samuel Ernest Peck
William Edward Smith

Annie Rosenberg

Graduate Students

IN COURSES FOR THE MASTER'S DEGREES

RESIDENT

Francis Stephens Bernauer, A. B., 1902, - Trevor Hall.
History, Philosophy.

George Halcott Chadwick, Ph. B., 1904, 87 Kenilworth Ter.
Geology, Philosophy.

*Harriette Arms Curtiss, A. M., - 74 South Union St.
Biology.

*John Mason Davidson, A. B., - - 340 Oxford St.
Chemistry.

Floyd Cooper Fairbanks, A. B., 1901, - Culver Road.
Physics, Chemistry, Mathematics.

Kenneth Samuel Howard, B. S., 1904, - 20 Selye Ter.
Chemistry, Geology.

Sophia Clark Kenyon, B. Lit., - - 1056 South Ave.
Biology.

*William Francis Love, Ph. B., 1903, - - 63 Eddy St.
English.

Walter George Parkes, B. S., 1900, - - Rochester
Geology, Chemistry.

Charles Eugene Ross, A. B., 1901, - - Trevor Hall.
Philosophy.

Harold Edward True, A. B., - 9 Portsmouth Terrace.
Chemistry.

*George Harold Wolcott, A. B., 1904, . 17 N. Goodman St.
English

Phebe H. Beadle, A. B., Vassar, 1900, 707 Main St. E.
Biology.

Alice Harriet Colby, A. B., 1904, - 39 Rutgers St.
English, German, Romance Languages.

Ruth Hogarth Dennis, A. B., 1903, - 1548 Main St. E.
English, German, French.

Evelyn O'Connor, A. B., 1903, - - 146 Frank St.
English, Latin, Romance Languages.

Charles William Watkeys, A. B., 1901, 12 Anderson Ave.
Mathematics.

NON-RESIDENT

Faust Charles DeWalsh, A. B., 1903, - *Tucson, Ariz.*
Philology, German, French.

George Briggs Huntington, A. B., 1896, - *Boston, Mass.*
History, Philosophy.

Joseph Henry Sinclair, A. B., 1902, - *Washington, D. C.*
Geology.

Herbert William Vodra, A.B., 1901, *Rio Piedras, Porto Rico.*
Romance Languages, Philosophy.

Bertrand Holmes Wallace, A. B., 1901, *West Chester, Pa.*
German, French, Philosophy.

*Not working for a degree.

The Senior Class

(1905)

Name	Course	Residence	City Address
Louis Jonathan Bailey,	Sc.	*Ontario,*	97 Manhattan St.
Charles Orson Beaman,	Sc.	*Coldwater,*	Coldwater.
Walter Riley Beckley,	Ph.	*Rochester,*	403 East Ave.
Leon Jermain Brace,	Cl.	*Rochester,*	36 Winthrop St.
George Burt Caudle,	Cl.	*Rochester,*	404 East Ave.
Albert B. Clark,	Cl.	*Palmyra,*	35 Strathallan Pk.
Trafton Milford Crandall,	Cl.	*Rochester,*	181 Fulton Ave.
Thomas Dransfield, Jr.,	Cl.	*Rochester,*	13 Myrtle Hill Pk.
Chester Garfield Gilbert,	Ph.	*Rochester,*	65 Prince St.
LeRoy Halbert,	Cl.	*Rochester,*	452 Garson Ave.
Merritt Way Haynes,	Cl.	*Angelica,*	130 University Ave.
Dana Boardman Hellings,	Cl.	*Buffalo,*	65 Prince St.
Edward Huntington Jacobs,	Cl.	*Detroit, Mich.*	41 Prince St.
Raymond Coon Keople,	Cl.	*Cuba,*	575 Mt. Hope Ave.
Irving Nelson Kohler,	Cl.	*Fairport,*	17 Beverly St.
Avery Morgan Meech,	Cl.	*Hilton,*	35 Strathallan Pk.
Edward Ernest Morris,	Cl.	*Rochester,*	146 S. Goodman St.
Hiram Olsan,	Ph.	*Rochester,*	138 Hudson Ave.
Howard Charles Page,	Cl.	*Jordan,*	65 Prince St.
Louis Albert Pultz,	Cl.	*Staatsburg,*	41 Prince St.
Arthur Raynsford,	Cl.	*Rochester,*	30 Finch St.
George Nelson Sage,	Sc.	*Clifton Springs,*	35 Strathl'n Pk.
Alphonse Joseph Sigl,	Cl.	*Rochester,*	73 Portland Ave.
Thur Smith,	Sc.	*Newark Valley,*	37 Birch Cresc.
Arthur Lawrence Stewart,	Cl.	*Rochester,*	296 Alexander St.
Carroll Arthur Sutherland,	Sc.	*Rochester,*	2 Arnold Pk.
Albert Perlea VanDusen,	Cl.	*Rochester,*	165 East Ave.

Frederick Weik,	Cl.	*Rochester,*	58 Portland Ave.
Edmund Worthington Westervelt,	Cl.	*Rochester,*	945 St. Paul St.
Jasper Heman Wright,	Sc.	*Avon,*	309 University Ave.
Theodore Augustus Zornow,	Ph.	*Pittsford,*	706 N. Clinton St.

Carolyn Lucy Adams,	Cl.	*Franklinville,*	44 Carleton St.
Jane Ernisse Crowe,	Cl.	*Rochester,*	13 Birch Cresc.
Florence Margaret Levis,	Cl.	*Rochester,*	185 Fulton Ave.
Helen Rogers,	Cl.	*Rochester,*	1 Arlington St.
May Ethel Rosenthal,	Ph.	*Rochester,*	1 Audubon St.
Gertrude Salisbury,	Cl.	*Rochester,*	49 Vick Park A.
Grace Elizabeth Salter,	Ph.	*Rochester,*	52 Frost Ave.
Hallie Irene Shearer,	Cl.	*Rochester,*	81 Park Ave.
Mayme Frances Smith,	Ph.	*Rochester,*	558 Hayward Ave.
Florence Abbie Southworth,	Cl.	*Rochester,*	138 Broadway.
Alvalyn Eunice Woodward,	Ph.	*Chili,*	410 Powers Block.

The Junior Class

(1906)

Name	Course	Residence	City Address
George Latta Barrus,	Sc.	*Charlotte,*	Charlotte.
Frederick Betz,	Cl.	*Rochester,*	330 Central Ave.
H. Willard Bosworth,	Sc.	*Rochester,*	41 Prince St.
Albert Bowen,	Cl.	*Rochester,*	221 Oxford St.
Edwin Roy Bowerman,	Sc.	*Fairport,*	65 Prince St.
Laurence Bacon Brink,	Cl.	*Manhattan, Kansas,*	35 Strathallan Pk.
Walter Austin Calihan,	Cl.	*Rochester,*	106 Jones St.
William Rice Foster,	Cl.	*Rochester,*	153 S. Goodman St.
Leigh Butler Hall,	Sc.	*Beech Ridge,*	65 Prince St.
Raymond Hardy,	Cl.	*Andover,*	20 William St.
Charles Lacy Harris,	Cl.	*Fairport,*	35 Strathallan Pk.
William Hawley Higbie,	Cl.	*Chili Station,*	35 Strathallan Pk.
Carr Gilman Horn,	Sc.	*Acton, Me.,*	127 Scio St.
Embry Crittenden McDowell,	Cl.	*Rochester,*	6 Canfield Pl.
Jacque Louis Meyers,	Cl.	*Rochester,*	76 Brunswick St.
Walter Steefel Meyers,	Cl.	*Rochester,*	76 Brunswick St.
Karl Suits Morgan,	Ph.	*Rochester,*	94 Field St.
Charles Peters Oliver,	Ph.	*Rochester,*	58½ Charlotte St.
Clarence Melvin Platt,	Ph.	*Rochester,*	356 Oxford St.
Arthur Rathjen,	Sc.	*Rochester,*	111 River St.
Lewis Garlick Reynolds,	Ph.	*Rochester,*	98 Asbury St.
Ancel St. John,	Ph.	*Brooklyn,*	65 Prince St.
Robert Osmond Saunders,	Cl.	*Friendship,*	721 University Ave.
William Albert Searle,	Ph.	*Rochester,*	466 Clinton Ave. N.

Harry John Simmelink,	Sc.	*Rochester,*	309 Hudson Ave.
Charles Arthur Simpson,	Ph.	*Rochester,*	118 Columbia Ave.
Fred Joseph Slater,	Ph.	*Charlotte,*	Charlotte.
Martin Tiernan,	Cl.	*Charlotte,*	96 Park Ave.
Harry Swain Todd,	Ph.	*Spencerport,*	Spencerport.
Douglas Edwin Wilder,	Ph.	*Newark,*	276 Monroe Ave.
Lewis Mitchell Wilson,	Cl.	*Macedon,*	35 Strathallan Pk.

Mary Ina Coe,	Ph.	*Yates,*	567 Averill Ave.
Anna Brown Copeland,	Ph.	*Rochester,*	10 Epworth St.
Lillian Louise Crafts,	Ph.	*Rochester,*	97 Glendale Pk.
Grace Elizabeth Curtis,	Ph.	*Hilton,*	37 Birch Cres.
Herma Maud Harkness,	Sc.	*Rochester,*	557 Dewey Ave.
Ethel McKay Kates,	Ph.	*Rochester,*	15 Hart St.
Blanche Eunice King,	Ph.	*Mertensia,*	168 Meigs St.
Ednah Kathryn Levis,	Cl.	*Rochester,*	185 Fulton Ave.
Leah McParlin,	Ph.	*Rochester,*	97 Prince St.
Clara Townsend Moseley,	Ph.	*Bergen,*	57 S. Goodman St.
Charlotte Stoddard Stone,	Ph.	*Rochester,*	108 Highland Ave.
Helen Elizabeth Thomas,	Ph.	*Silver Creek,*	8 N. Goodman St.

The Sophomore Class

(1907)

Name	Course	Residence	City Address
Howard Walrath Allen,	Sc.	*Ulysses, Pa.,*	65 Prince St.
Wilbur Wilcox Bancroft,	Ph.	*Fairport,*	Fairport.
Howard Phillips Barss,	Cl.	*Rochester,*	70 Meigs St.
Garnet Alexander Bedell,	Cl.	*Fairport,*	Fairport.
Phillip Bernhardt,	Cl.	*Rochester,*	91 Kelly St.
William Curtis Clark,	Sc.	*Rochester,*	6 Portsmouth Ter.
Herman Michaels Cohn,	Ph.	*Rochester,*	61 Westminster Rd.
Jay Edward Dutcher,	Cl.	*Rochester,*	59 Ontario St.
LeRoy Frink Fairchild,	Sc.	*Rochester,*	363 Alexander St.
Edgar Jacob Fisher,	Cl.	*Rochester,*	21 Edmonds St.
Herbert Ernest Fowler,	Sc.	*Rochester,*	78 Dewey Ave.
Harold Benton Gilbert,	Sc.	*Avon,*	96 Park Ave.
Benjamin Goldstein,	Ph.	*Rochester,*	56 Vienna St.
Ralph Elmer Harmon,	Cl.	*Clifton,*	65 Prince St.
Charles David Heaton,	Cl.	*Rochester,*	52 Brighton St.
Walter Clifford Hurd,	Cl.	*Deep River, Ct.,*	255 University Ave.
Ward Delazon Jordan,	Sc.	*Friendship,*	35 Strathallan Pk.
Carl Frederick William Kaelber,	Cl.	*Rochester,*	587 University Ave.
William Edward Kinney,	Cl.	*Rochester,*	64 Lorimer St.
Max Isidore Klein,	Ph.	*Rochester,*	3 Crystal Place.
Louis Freiberg Levenson,	Sc.	*Dayton, O.,*	112 William St.
Harry Carl Michaels,	Cl.	*Rochester,*	272 East Ave.
Alvah Strong Miller,	Cl.	*Rochester,*	12 Reynolds St.
Theodore Augustus Miller,	Cl.	*Rochester,*	12 Reynolds St.
Joseph Crombie Napier,	Cl.	*Rochester,*	289 Mt. Hope Ave.
Frederick Francis O'Connor,	Sc.	*Rochester,*	158 St. Paul St.
Carl Griff Palmer,	Cl.	*Rochester,*	111 So. Union St.

George Truman Palmer,	Sc.	*Palmyra,*	5 Canfield Pl.
Francis Lamont Peirce,	Ph.	*Spencerport,*	Spencerport.
Floyd Orton Reed,	Sc.	*Center Lisle,*	127 Merriman St.
Wallace Robert Reid,	Ph.	*No. Tonawanda,*	65 Prince St.
William Cornelius Roades,	Cl.	*Rochester,*	62 Rowley St.
Hugh Alexander Smith, Jr.,	Cl.	*Brockport,*	65 Prince St.
Edward Adolph Stahlbrodt,	Ph.	*Rochester,*	26 Lake View Pk.
George Timothy Sullivan,	Cl.	*Rochester,*	184 No. Union St.
Mark Wallace Swetland,	Cl.	*Hightstown, N. J.,*	4 Vine St.
Archie Wilcox Symonds,	Sc.	*Woodhull,*	65 Prince St.
Louis Frank Talbot,	Cl.	*Rochester,*	357 Jay St.
Earl Wesley Taylor,	Cl.	*Cohoes,*	4 Vine St.
Edgar George Thomssen,	Sc.	*Rochester,*	445 Joseph Ave.
Edgar Flandreau Van Buskirk,	Cl.	*Brooklyn,*	428 Alexander St.
Robert John Walkinshaw,	Ph.	*N. Tonawanda,*	65 Prince St.
Myron James Walter,	Sc.	*Clifton Springs,*	35 Strathallan Pk.
Roger Hale Wellington,	Ph.	*Rochester,*	20 Argyle St.
Nathaniel George West,	Cl.	*Rochester,*	466 Garson Ave.
Ralph Grant Yeaton,	Sc.	*Brooklyn,*	285 Alexander St.

Bertha May Adams,	Cl.	*Fairport,*	Fairport.
Elizabeth Alice Butler,	Cl.	*Rochester,*	25 Warner St.
Clara Bessie Crittenden,	Ph.	*Rochester,*	73 Costar St.
Marie Agatha Felsinger,	Cl.	*Rochester,*	123 Orange St.
Amy Gazena Hardick,	Cl.	*Fairport,*	Fairport.
Lucy Camille Higbie,	Cl.	*Rochester,*	150 Park Ave.
Marion Melville,	Ph.	*Rochester,*	83 Glendale Pk.
Enid Elvira Morris,	Cl.	*Lincoln,*	362 University Ave.
Bessie Florence Pettis,	Ph.	*Rochester,*	73 Glendale Pk.
Ethel Rogers,	Cl.	*Rochester,*	1 Arlington St.
Florence Russell,	Ph.	*Rochester,*	2 Argyle St.
Ida Marie Wannemacher,	Ph.	*Rochester,*	331 Joseph Ave.

The Freshman Class

(1908)

Name	Course	Residence	City Address
Harold Edward Akerly,	Sc.	*Rochester,*	13 Amherst St.
Arthur Howe Allen,	Sc.	*Honeoye Falls,*	Honeoye Falls.
Roy David Anthony,	Sc.	*Rochester,*	358 West Ave.
Hiram Leonard Barker,	Jr., Ph.	*Rochester,*	280 Monroe Ave.
Harold de Blois Barss,	Cl.	*Rochester,*	70 Meigs St.
Percy Alvin Benedict,	Sc.	*Pultneyville,*	445 Alexander St.
Stephen Leon Bidwell,	Cl.	*Rochester,*	73 Kenwood Ave.
Harry Bloom,	Ph.	*Rochester,*	79 Chatham St.
Eldred S Brandt,	Ph.	*Ontario,*	173 Grand Ave.
Walter Rollin Brooks,	Ph.	*Rochester,*	343 West Ave.
John Edwin Burr,	Cl.	*Rochester,*	80 Flint St.
Walter Henry Cassebeer,	Sc.	*Rochester,*	769 St. Paul St.
Delwin D. Chapin, Jr.,	Ph.	*Harrison Valley, Pa.,*	65 Prince St.
Leslie Marsland Conly,	Ph.	*Brooklyn,*	47 Hand St.
Bayard Thomas DeMallie,	Ph.	*Rochester,*	39 Berkeley St.
Harry Packer Dinkey,	Cl.	*Rochester,*	14 Vick Park B.
Raymond Bruce Eddy,	Ph.	*Ontario Center,*	173 Grand Ave.
Elbert Eli Farman, Jr.,	Sc.	*Warsaw.*	
John Denison Fowler,	Cl.	*Rochester,*	19 Thayer St.
Thomas James Fulton,	Cl.	*Rochester,*	48 Rosedale St.
Arthur Samuel Hamilton,	Jr., Sc.	*Rochester,*	71 S. Washington St.
Stanley Wilfred Iles,	Cl.	*North Chili,*	83 Meigs St.
Louis Jacubowitz,	Ph.	*Rochester,*	8 Wait St.
Elon Huntington Jessup,	Sc.	*Brooklyn.*	
George Hanes Joy,	Sc.	*Rochester,*	1145 Main St. E.
Roy David Kinney,	Ph.	*Belfast,*	30 Boardman St.

Elmer George Koch,	Sc.	*Rochester,*	579 University Ave.
Charles Frederick Lauer,	Cl.	*Rochester,*	19 Meigs St.
Fred Raymond Lewis,	Ph.	*Charlotte.*	
Charles Darius Marsh,	Cl.	*Spencerport,*	Spencerport.
Gregory James Martin,	Ph.	*Middletown,*	67 Charlotte St.
Charles Edmund Meulendyke,	Sc.	*Rochester,*	11 Upton Pk.
George William Morris,	Cl.	*Rochester,*	146 S. Goodman St.
Lloyd Partridge,	Cl.	*East Bloomfield,*	43 East Ave.
Arthur Thomas Pammenter,	Ph.	*Irondequoit,*	Irondequoit.
Robert Francis Paviour,	Sc.	*Rochester,*	537 Averill Ave.
Samuel Porter,	Cl.	*Elba,*	133 Plymouth Ave.
Carleton Elderkin Power,	Sc.	*Rochester,*	29 Thayer St.
Arthur Franklin Priest,	Sc.	*Haverhill, Mass.,*	285 Alexander St.
Dean Todd Pryor,	Ph.	*Rochester,*	50 Gorsline St.
Warrant Pryor,	Ph.	*Rochester,*	50 Gorsline St.
Edward Hayes Sawers,	Sc.	*Rochester,*	548 Lake Ave.
Max Schweid,	Cl.	*Rochester,*	359 Alexander St.
Howard John Steere,	Ph.	*Oxford,*	41 Prince St.
Arthur John Steinhardt,	Cl.	*Rochester,*	22 Scio St.
Norman Hamilton Stewart,	Cl.	*Rochester,*	296 Alexander St.
Edgar Charles Taggart,	Sc.	*Wilkesbarre, Pa.,*	96 Park Ave.
Albert Moore Taylor,	Ph.	*Albion,*	21 East Ave.
Harry Cecil Taylor,	Ph.	*Rochester,*	13 Bingham St.
James Joseph Tighe,	Ph.	*Avon,*	82 Danforth St.
Arthur Fuller Truex,	Sc.	*Rochester,*	28 N. Union St.
Clayton Irving Ward,	Ph.	*Lockport,*	96 Park Ave.
Andrew Jackson Warner,	2nd Cl.	*Rochester,*	109 Troup St.
Samuel Young Whitehouse,	Cl.	*Rochester,*	99 Alexander St.
Maurice Alton Wilder,	Sc.	*Bergen,*	Bergen.

Edgar Clinton Wolcott,	Cl.	*Rochester,*	216 N. Goodman St.
Leland Foster Wood,	Cl.	*Albion,*	Albion.
Hiram Wooden,	Cl.	*Rochester,*	131 Frank St.
Clara Belle Abbott,	Cl.	*Rochester,*	18 Lawrence St.
Margaret Tyson Applegarth,	Cl.	*Rochester,*	216 Culver Rd.
Alma Harriet Austin,	Ph.	*Rochester,*	10 Arlington St.
Ethel Josephine Bills,	Cl.	*Rochester,*	206 Scio St.
Ollie Antoinette Braggins,	Cl.	*Rochester,*	15 Locust St.
Emily Gertrude Crump,	Ph.	*Pittsford,*	Pittsford.
Dorothy Dennis,	Cl.	*Rochester,*	1548 Main St. E.
Annis Matilda Dunn,	Ph.	*Scottsville,*	28 Avondale Pk.
Carolyn Lillian Emerson,	Ph.	*Rochester,*	36 Vick Park B.
Grace Elizabeth Fowler,	Cl.	*Rochester,*	19 Thayer St.
Carolyn Myrtle Heffer,	Cl.	*Irondequoit,*	Irondequoit.
Françoise Nellie Klein,	Ph.	*Rochester,*	726 Jay St.
Leila Marion Eysaman,	Ph.	*Heuvelton,*	56 Meigs St.
Blanche Marshall Griffith,	Sc.	*Rochester,*	103 Park Av.
Grace Lawrence Hall,	Ph.	*Walworth,*	Walworth.
Iva Mary Hall,	Ph.	*Walworth,*	Walworth.
Mary Esther Lane,	Ph.	*Webster,*	Webster.
Georgia Louise Law,	Ph.	*Fort Ann,*	37 Birch Crescent.
Olive Lucie MacGregor,	Ph.	*Rochester,*	77 Bartlett St.
Ruth Tillotson Miller,	Ph.	*Scottsville,*	13 Birch Crescent.
Florence Elvine Mosher,	Ph.	*Rochester,*	325 West Ave.
Marion Dix Mosher,	Ph.	*Rochester,*	325 West Ave.
Alicia May Morey,	Cl.	*Fairport,*	Fairport.
Jessie Naomi Owler,	Ph.	*Rochester,*	19 Evergreen St.
Helen Marguerite Persons,	Ph.	*Rochester,*	79 South Goodman.
Marian Salisbury,	Cl.	*Rochester,*	49 Vick Park A.
Leila Belle Smith,	Cl.	*Rochester,*	231 Fulton Ave.
Ruth Tappan,	Ph.	*Sherman,*	26 Boardman St.
Ethel Alice Turner,	Ph.	*South Livonia,*	239 Westminster Rd.

Special Students

Name	Year	Residence	City Address
Herbert Benton Arthur,	IV	*Carthage,*	20 William St.
Floyd Erwin Bernard,	II	*Sandusky,*	35 Strathallan Pk.
Abie David Burr,	II	*Charlotte,*	285 Alexander St.
Earle Morse Copp,	II	*Rochester,*	96 Park Ave.
Chester Frederic Craigie,	III	*Catskill,*	65 Prince St.
Percy Bruce Dutton,	IV	*Rochester,*	35 Evergreen St.
Prentiss Bailey Gilbert,	III	*St. Paul, Minn.,*	41 Prince St.
Macy Orsen Hallock,	I	*Rochester,*	487 Lake Ave.
Curtis Danals Hart,	I	*Rochester,*	14 Sumner St.
Frederick William Herman,	I	*Irondequoit,*	Irondequoit.
William Emerson Housel,	I	*Holley,*	Holley.
Alfred LeGrand Kinter,	III	*Chili,*	Chili.
Lloyd Randolph Kneeland,	I	*Lyons,*	37 Birch Crescent.
H. Acton Langslow,	I	*Rochester,*	32 Hamilton St.
Lewis Enoch Munger,	I	*Holley,*	35 Strathallan Pk.
Joseph Lewis O'Connor,	I	*Rochester,*	32 Jefferson St.
John Wilhelm Radu,	I	*No. Tonawanda,*	37 Birch Cres.
William Cline Rugg,	I	*Victor,*	67 Charlotte St.
Ralph Carl Schwarz,	I	*Rochester,*	292 Monroe Ave.
Seward Dwight Smith,	I	*Chili Station,*	Chili Station.
Harold Osborn Stewart,	II	*Rochester,*	37 Clinton Ave. S.
George Herbert Studley,	IV	*Rochester,*	11 Rowley St.
Fred Kalbfleisch Taylor,	I	*Rochester,*	25 Lake View Pk.
Albert Vosburg,	II	*Charlotte,*	285 Alexander St.
Henry Lincoln Wilder,	II	*Hingham, Mass.,*	96 Park Av.
John Winslow,	I	*Ithaca,*	65 Prince St.

Katherine Allan,	II	*Rochester,*	71 Edmonds St.
Katharene Blackford,	I	*Rochester,*	369 Alexander St.
Effie Helen Esson,	II	*Rochester,*	130 Woodward St.
Beulah Elizabeth Fuller,	I	*Rochester,*	83 Adams St.
Emma Culross Gibbons,	II	*Rochester,*	97 Ambrose St.
Winifred Stuart Gibbs,	I	*Rochester,*	72 S. Union St.
Harriet May Hadley,	I	*Rochester,*	84 Reynolds St.
Jane Parsons Hanna,	IV	*Rochester,*	125 Grand Ave.
Sophia Clark Kenyon,	IV	*Rochester,*	1056 South Ave.
Verna Frances Robinson,	I	*Rochester,*	173 Maryland St.
Madelon Dix Schuyler,	II	*Rochester,*	16 Granger Place.
Susan Eleanor Taylor,	I	*Rochester,*	85 Caledonia Ave.
Minerva Claire Williams,	III	*Rochester,*	45 Brighton St.

Summary

	Men	Women	Total
Graduate Students - - -	16	6	22
Seniors - - - - -	31	11	42
Juniors - - - - -	31	12	43
Sophomores - - - -	47	12	59
Freshmen - - - - -	58	28	86
Special Students - - -	26	14	40
Totals - - - -	209	83	292

CANDIDATES FOR BACHELOR'S DEGREES

	Seniors	Juniors	Sophomores	Freshmen	Total
Classical - -	28	15	31	30	104
Philosophical -	8	19	14	38	79
Scientific -	6	8	14	19	47
Totals -	42	42	59	87	230

Calendar for 1905-1906

SPRING TERM

Instruction begins,	Thursday, March 23.
Stated Faculty Meeting,	Wednesday, March 29.
Latest date for presentation of Commencement orations,	Wednesday, March 29.
Latest date for paying term bills,	Saturday, April 15.
Stated Faculty Meeting,	Wednesday, April 19.
Announcement of appointments for Commencement,	Thursday, April 20.
Latest date for presentation of Senior prize essays,	Thursday, April 20.
Stated Faculty Meeting,	Wednesday, May 17.
Examination for the Stoddard Medal,	Saturday, May 20.
Recess (Memorial Day),	Tuesday, May 30.
Latest date for registration of elective studies for Autumn term,	Monday, June 12.
Stated Faculty Meeting,	Wednesday, June 14.
Term examinations, Wednesday to Friday,	June 14–17.
Baccalaureate Sermon,	Sunday, June 18.
Class Day,	Monday, June 19.
Trustee Meeting,	Tuesday, June 20.
Phi Beta Kappa Business Meeting,	Tuesday, June 20.
Alumni Business Meeting,	Tuesday, June 20.
Oration before the Phi Beta Kappa Society.	Tuesday, June 20.
Alumni Reunion,	Tuesday, June 20.
Commencement Exercises,	Wednesday, June 21.
Alumni Dinner,	Wednesday, June 21.
President's Reception,	Wednesday, June 21.
Entrance examinations begin (see page 48),	Monday, June 26.

AUTUMN TERM

Entrance examinations and matriculation of new students (see page 49),	Tuesday and Wednesday, September 19, 20.
Instruction begins,	Thursday, September 21.
Stated Faculty Meeting,	Wednesday, Sept. 27.
Latest date for paying term bills,	Monday, October 2.

Announcement of honor students,	Thursday, October 5.
Stated Faculty Meeting,	Wednesday, October 11.
Latest date for presentation of Senior orations,	Monday, October 30.
Stated Faculty Meeting,	Wednesday, Nov. 1.
Recess (Election Day),	Tuesday, Nov. 7.
Stated Faculty Meeting,	Wednesday, Nov. 29.
Thanksgiving recess, from the evening of Wednesday to the morning of Monday, begins,	Thursday, Nov. 30.
Latest date for registration of elective studies for Winter term,	Wednesday, Dec. 13.
Term examinations, Tuesday to Friday,	December 19–22.

WINTER TERM—1906

Instruction begins,	Wednesday, January 3.
Stated Faculty Meeting,	Friday, January 5.
Announcement of Freshman honor students,	Monday, January 8.
Latest date for registration of competitors for Senior prizes,	Monday, January 8.
Latest date for paying term bills,	Monday, January 15.
Day of Prayer for Colleges,	Thursday, January 25.
Stated Faculty Meeting,	Wednesday, February 7.
Recess (Washington's Birthday),	Thursday, February 22.
Dewey Prize Declamations,	Friday, February 23.
Latest date for registration of elective studies for Spring term,	Monday, March 5.
Stated Faculty Meeting,	Wednesday, March 7.
Term examinations, Saturday to Wednesday,	March 17–21.

SPRING TERM—1906

Instruction begins,	Thursday, March 29.
Stated Faculty Meeting,	Wednesday, April 4.
Latest date for paying term bills,	Tuesday, April 10.
Latest date for presentation of Commencement orations,	Wednesday, April 11.
Stated Faculty Meeting,	Wednesday, April 25.
Announcement of appointments for Commencement,	Thursday, April 26.
Latest date for presentation of Senior prize essays,	Thursday, April 26.

Index

	PAGE.
Admission	31
Advanced Standing	53
By Certificate	50
Requirements for	35–47
Aid	27
Alumni, Organizations of	134
Anderson Hall	11
Art, Lectures on the History of	118
Astronomy	101
Attendance	128
Bachelor's Degrees, Courses of Study for	54–71
Biblical Literature	118
Biology	104
Board of Trustees	5
Botanical Institutions	25
Calendar for 1905–6	152
Campus	11
Chemistry	102
College Entrance Examination Board	49
Conditions, Failure, and Rejection	52, 129
Deferred Tuition	33
Degrees Conferred in 1904	136
Eastman Laboratories	11
Elocution	83
Employment, Student	27
Engineering, Courses Preparatory to	74
English	83
Examinations, Entrance	48
Final	80, 129
Expenses	26
Faculty, The	9
French	94
General Regulations	127
Geological Collections, The Ward	22
Geology	108
German	92
Graduate Courses	78
Greek	85
Gymnasium	11
History and Political Science	111
Honors, Departmental	120
Honors and Prizes	120
Honorable Mention Awarded in 1904	133
Italian	95
Latin	88

	PAGE.
Lectures and Recitations	127
Libraries	10, 12
Law	15
Reynolds	15
Theological Seminary	15
University	12
Laboratories	16–21
Manual Training Normal Course,	76
Master's Degrees, Courses for	78
Maximum and Minimum Hours	127
Mathematics	96
Mechanical Drawing and Shop Work	101
Medicine, Courses Preparatory to	73
Museums and Cabinets	22
Music Library	13
Organization	3
Pedagogy	75, 116
Philology	92
Philosophy	115
Physical Education	118
Physics	99
Political Economy	114
Prizes	120–125
Awarded in 1904	131
Prescribed and Elective Studies	54–71
Professional Study, Preparation for	73
Pretechnical Studies	63
Registration	41, 78
Religious Exercises	130
Reynolds Memorial Laboratory	11
Rhetoric	81
Saturday Classes	126
Scholarships	27–35
Sibley Hall	11
Spanish	95
Students, Special	72
Graduate	138
Directory of	140–150
Tuition	26
Deferred	33
Teachers' Register	76
Teachers' Training Department,	75
Telescope	20
Terms and Vacations	127
Ward's Natural Science Establishment	24
Women, Admission of	4
Scholarships for	31
Zoölogical Collection, The	24